Teaching and Learning about Research in the Context of the Project 2000 Nursing Curriculum in Scotland: Perceptions and Experiences of Lecturers and Students

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DEDICATION

Dedicated to Captain James F. Matthews
My father, my mentor, my hero

HIGH FLIGHT

Oh, I have slipped the surly bonds of earth
And danced the skies on laughter silvered wings;
Sunward I've climbed, and joined the tumbling mirth
Of sun-split clouds… and done a hundred things
You have not dreamed of..wheeled and soared and swung.
High in the sunlit silence. Hov'ring there,
I've chased the shouting wind along, and flung
My eager craft through footless halls of air
Up, up the long, delirious, burning blue
I've topped the windswept heights with easy grace
Where never lark, or even eagle flew.
And while with silent, lifting mind I've trod
The high untrespassed sanctity of space,
Put out my hand, and touched the face of God.

Pilot Officer G. Magee
412 SQN. RCAF
Killed in action, 11 December
1941

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DECLARATION

No portion of the work referred to in this thesis has been submitted in support of another application for another degree or qualification of this or any other university or institute of learning.

Signed

DISCLAIMER

The views expressed in this study are those of the researcher and not necessarily those of the Nursing and Midwifery Council (formerly The National Board for Nursing, Midwifery and Health Visiting for Scotland).

ABSTRACT

This thesis centres on an analysis of the perceptions of lecturers and students on the place of research in the nursing curriculum. An investigation into the conceptions held by both teachers and students requires the research to be conducted from a 'second order' perspective. The way teachers think about teaching and the way students think about learning cannot be observed. A recently developed second-order qualitative approach known as phenomenography (Marton, 1981; 1986), which has been used extensively in research, has been adapted for this study. The samples consisted of mental health nursing students from three higher education institutions in Scotland. The lecturer samples were from the same institutions and were selected on the basis of their involvement in delivering the research aspects of the curriculum. Data collection techniques included in-depth interviews and focus group discussions. The qualitative data package - NUD-IST was used to assist management of the data during analysis. It became clear through this project that there needs to be more evidence-based support for the rhetoric on evidence-based nursing, and its place in teaching and learning. The thesis has provided a basis for developing research in nursing education in this direction by describing a fully developed methodology especially suitable for this research purpose. In addition, it has offered a conceptual framework that provides a stronger theoretical underpinning for nurse education, derived directly from the experiences of students, as well as staff, in nurse education. In so doing, it also contributes to the wider research into student learning which is currently paying more attention than in the past to teaching and learning within the differing subject areas.

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Chapter 1

Introduction and Background to the Thesis

In recent years the Nursing and Midwifery Council (NMC) (previously the United Kingdom Central Council for Nursing, Midwifery and Health Visiting UKCC) has sought to promote the development of research knowledge and skills in registered nurses and has based its efforts on a particular model of the professional practitioner. This model assumes each registered nurse is a competent finder, appraiser and user of research evidence. It has a vision of all registered nurses acting as autonomous practitioners, able to adapt their practice according to their own expert assessment of current research findings. Through its powers of strategic regulation of nurse training and education, the NMC has entrusted to NHS Education Scotland (NES) (previously the National Board for Nursing, Midwifery and Health Visiting for Scotland) the approval mechanisms for Higher Education Institutions to prepare nurses for their role at both pre and post-registration levels.

Research is therefore considered by the nursing scientific and professional community as the energy source for development of the discipline (Poletti, 1995). It is also seen as providing the necessary and credible foundation for professional knowledge and activity. If the intention is to move towards an evidence-based health care culture, then it is essential that a critical mass of health care professionals are either in a position to conduct research or to implement published research findings. However, both activities rely for their success on a common understanding of the appropriate parameters by which these processes are undertaken. A lack of collective agreement about the nature of

research and its procedures may lead, on the one hand, to an unsystematic and faulty application of research in both contexts or, on the other, act as a significant deterrent to nurses undertaking any form of research activity.

Current educational provision aims to facilitate the NMC model through the teaching of research methods and, more recently, the skills of reviewing and appraising evidence. If the aim is to enable all first level nurses to have the skills to find, appraise and use research, then a judgement is required as to what counts as a threshold competence in these activities. Educational provision varies from brief workshops on research appreciation, through modules on pre-registration programmes to full Masters programmes on research methods and systematic reviewing. A practitioner acting on the basis of their own assessment of research evidence needs to be aware that, if their practice is contested, their understanding of the research evidence could be tested in a judicial setting. Their level of mastery of the technical aspects of research would in such a case need to be of a high standard.

Nurse education has been the subject of widespread debate and controversy for a number of decades (RCN, 1942; RCN, 1964; DHSS, 1972; UKCC, 1986; UKCC, 1994). A central aspect of the debate has been the educational preparation of nurses and the adequacy of the apprenticeship model of preparation in fulfilling students' educational requirements (Ramprogus, 1995). Further, new demands and expectations of professional practice due to changing health care needs, and to developments in the delivery of the health care, have had significant implications for the role of nurses. Such changes need to be reflected in any pre–registration nurse education programme in order to ensure 'fitness

for purpose' (UKCC, 1986). The increasing emphasis on evidence–based practice (Davidoff *et al.*, 1995) has led to a need to develop the research base upon which nursing practice ought to rely. The education of the nursing workforce is therefore of central importance to the generation and continuation of its research capacity. Additionally, the move of nurse education into the higher education sector, and the numerous changes which have occurred in this sector, are of direct relevance to the education system in which nursing is currently situated. The demand on nurse teachers to be both consumers and instigators of research has added new stresses to a rapidly changing role. Consequently, a study, which examines the perceptions of teachers in their role in delivering the research curriculum, and students in their role as recipients, could provide useful insights into how realistically nurse education is addressing the research agenda. It could also help to set the teaching of research in nursing within a much firmer conceptual framework.

Research development in nursing would not have been possible without the numerous changes which have occurred in the education structure. As studies of nursing history have shown, the shift in the occupational identity, from the moral to the professional, that occurred in the last part of the nineteenth century, had a profound influence on the way in which knowledge was understood (Rafferty, 1995; 1996). Supporters of the professional understanding of nursing tended to look to medicine and the tradition of the natural sciences in developing knowledge for professional practice. The promotion of theoretical knowledge through research is still an important aspect of nursing's attempt to enhance its status as a profession; a distinct language for the profession has also been gradually emerging. However, for many, it remains a relatively new concept and raises the question

of how students can apply theory derived from research to their experience within the practice area.

The context within which research in nurse education has developed has been influenced by the above, but is also influenced by rapid changes in educational research. The ways in which students go about their learning and teachers deliver a curriculum have been the subject of much investigation within the higher education sector. There is now substantial literature which describes the various ways in which the learning environment, and particularly teaching methods and assessment procedures, can affect the quality of student learning (Biggs, 1989; Entwistle, 1992; Ramsden, 1992; Biggs, 1994; Trigwell *et al.,* 1994; Hounsell, 1997). More specifically there has been a substantial amount of research demonstrating how students' conceptions of learning relate to their approaches to studying, and consequently to the quality of their learning outcomes (Marton, 1988; Prosser and Miller, 1989; Trigwell and Prosser, 1991).

Two major strands comprise the research on student learning, both of which are important to the research reported here. The first strand examines students' approaches to learning based mainly on the development of descriptive concepts (e.g. Biggs and Collins, 1982; Entwistle and Ramsden, 1983; Marton and Säljö, 1984). This research, along with more recent work has described learning outcomes in terms of processes, with variations being explained by factors such as student motivation, intention, contextual factors, self-regulation and prior knowledge. The second strand focused on students' conceptions of learning and how students are thus likely to engage in the process of learning. In other words, students' beliefs about what constitutes knowledge and learning

have been found to influence the manner in which they approach learning and engage in the process of learning (Meyer and Parsons, 1989; Meyer and Boulton-Lewis, 1999).

On the basis of research on student learning, it could be expected that the conceptions of learning and teaching held by university teaching staff would also have some influence on the way they teach. More recently, there has been a growing interest in teachers' approaches to, and conceptions of, teaching. There is evidence to suggest that the way they conceptualise learning and teaching influences both their approaches to teaching and the extent to which their students reach higher levels of learning outcome (Prosser *et al.*, 1994). Although the link between conceptions and approaches is now clear for both staff and students the focus it takes inevitably depends upon the circumstances they find themselves in.

Nurse education: its evolution and the current situation

In order to understand the current educational system it is necessary to outline the some of the developments that have taken place in higher education but more specifically nurse education and its integration into it. This second section of this chapter provides the context for the study by exploring some of the major political, developmental and educational changes that have influenced the way in which more recent developments in nurse education have been constructed and implemented. This is provided as a means of setting the scene for the current study and addresses the institutional changes related to higher education, nurse education and changes in the National Health Service. This section provides the necessary background against which the main purposes of the study can be placed. The context is what staff and students work within and this thesis does not

attempt any theoretical analysis or critique of the early developments or the political decisions involved. The consequences of the decisions leading up to the implementation of Project 2000 are, however, considered carefully, as they have directly affected the conditions of the staff and students who are the focus of the study.

The movement of all pre-registration nursing programmes into Higher Education and the increasing diversity of the background of students entering nursing has introduced new approaches and expectations from nurse education institutions, students and future employers that are of direct relevance to the education system in which nursing is currently situated. Additionally, new demands and expectations of professional practice due to changing health care need, and to developments in the delivery of health care, have had significant implications for the role of nurses.

Institutional changes: The health care system

The election of the Thatcher Government in 1979, brought with it a wave of New Right thinking and saw a drive to replace the traditional system of administration within the National Health Service (NHS) with a form of private sector managerialism. The established system of rational planning to meet needs was replaced with a new managerial emphasis to remain within budget limits and contain costs (Harrison *et al.*, 1990). Great emphasis was also placed on the individual health care consumer, introducing the notion of the patient as a 'consumer' to the NHS. Such a change in philosophy was supported by mechanisms such as the Patients' Charter and the internal market, which were intended by the Government to force health care professionals to be more responsive to patient's preferences and needs. Additionally, the Government set out

to ensure that clear national standards for services would be supported by consistent evidence-based guidelines (DoH, 1999 p.1) The determination to use research-based evidence in this way has developed in a somewhat short period of time, and is based upon the NHS Research and Development Strategy (DoH, 1991) and the Culyer Report (DoH, 1994). Muir-Gray (1997) explains the crucial role of evidence-based decision-making as a process, which is considered to be essential in a publicly accountable health care system. Such changes have also had an impact on the process of nursing and nurse education, as nursing too is obliged to demonstrate cost effectiveness.

Evidence-based practice and research

A common starting point for the definition of evidence-based practice is the concept of evidence-based medicine (EBM). One of the early contributors to the evidence-based decision-making movement was Cochrane (1972) who argued that since health care resources will always be limited, those resources should be used to provide health care services that have been shown to be effective. His contribution went beyond simply rationalising the allocation of scarce resources, as he also wrote about the problems of applying research principles to health care and the difficulties of applying the results of research trials to the care of individual patients. Thus Cochrane combined a clinically orientated concern for the psychological and physical well-being of patients with a critical, research-orientated search for effective care.

Cochrane observed that although medicine had developed on the basis of the advance of pure science, the application of scientific principles was largely absent in the evaluation of new treatment methods. He was one of the first in medicine to promote the use of

randomised control trials in the evaluation of treatment methods and he pioneered the use of systematic reviews and meta-analysis in medicine. His influence in the UK National Health Service was profound. Since his death in 1988, the NHS has adopted his principles of systematic review and meta-analysis and also contributed, in 1992, to setting up the Cochrane Collaboration, an international initiative concerned with the preparation and dissemination of systematic reviews of health care research.

A second important influence in the development of evidence-based medicine was the development in medical education at McMaster University in Canada. Medical education was established at McMaster in the 1960's and pioneering teaching methods based on problem-based, self-directed learning were implemented. Central to this educational development was the integration of clinical practice with research, and the use of research principles to inform decisions about diagnosis, treatment and its side-effects, and prognosis. This new area was termed 'clinical epidemiology' (Sackett *et al.,* 1991) and differed from traditional research teaching in that it was aimed not at conducting research but at using research i.e. applying research findings to clinical problems.

Perhaps, because evidence-based practice at McMaster University was integrated into medical education at pre and post-qualification, impressive advances were made in developing the dissemination and understanding of research into clinical practice. Amongst these advances were randomised trials of teaching methods for research-appraisal skills to undergraduates, the use of information technology to assess research information to inform clinical decision-making, the development of abstracting,

appraising and disseminating clinical research to clinicians, and the adaptation of statistical methods to relate more directly to clinical significance.

More generally, the development of evidence-based medicine was based on three principles: interpretation and use of research findings; use of research to inform practice; and effective dissemination of research findings. Within this context, the roles of researchers and clinicians have changed with clinicians being defined as consumers of research. In this formulation there are clear mutual responsibilities of clinicians and researchers; clinicians need to develop skills to evaluate research and keep up to date with research findings, and researchers need to work closely with clinicians to define the most important research problems and also to develop methods of disseminating research effectively to clinicians.

Critics of evidence-based medicine

It has been argued that one of the problems relates to the actual terminology used. Rao, (1996) argues that the term EBM distresses medics in two ways: the suggestion that their current practice is not already evidence-based and the belief that in many areas of medicine there is little that could pass muster by way of evidence. Sackett *et al.*, (1996) point out that many clinicians believe they are already practising a form of EBP, but suggest this is not supported by the evidence, which shows striking variations in clinical behaviour. The question of lack of evidence in many areas of health care does seem a more legitimate argument, in that a large proportion of health care interventions are not evaluated at all (Firth Cozens, 1997).

Another frequently raised argument is that evidence-based medicine, and clinical guidelines in particular, do not represent the reality of clinical decision-making, where the clinician is frequently faced with unquantifiable variables (Lipman, 1996). Practitioners point out that discrete diagnostic categories do not fit very well with the real-world clinical practice settings. The fact that clinicians frequently identify differences between research and clinical populations is suggested as one of the main reasons why research findings are slow to be adopted (Firth Cozens, 1997).

However, advocates of evidence-based practice claim that it should not be approached in a slavish way, rather that best external evidence should be integrated with individual patient problems and choices, and the individual clinician's expertise (Sackett *et al.*, 1996). And this focus on the practitioner's own experience and the practice context, is one of the most significant aspects of EBP.

Evidence-based nursing

The United Kingdom Central Council for Nursing, Midwifery and Health Visiting (UKCC) (now known as the NMC) expectation is that each registered nurse will be a competent finder, appraiser and user of research evidence and that all registered nurses, acting as autonomous practitioners, will be able to adapt their practice according to their own expert assessment of current research findings. The NMC's position reflects a model of the professional practitioner as someone who can independently locate, appraise and use research evidence. In reality, the feasibility of such an aspiration is questionable for three main reasons. First, the technical complexity of research is too great to be mastered within the time available in pre and post registration nursing programmes. Secondly, the

process of locating, appraising, and appropriately integrating, research evidence into practice is so time consuming that, were practitioners and students to seriously engage in it, they would be unable to meet their clinical obligations. Finally, despite its entry into the higher education system nurse teachers are not yet adequately prepared or experienced to deliver the research aspects of the curricula.

The relationship between research and scientific development has been an important issue in nursing. In 1978, Donaldson and Crowley commenting on the increased research studies in nursing stated

> "The knowledge represented by the research questions and methodologies appear to be global. By definition, however, a discipline is not global; it is characterized by a unique perspective, a distinctive way of viewing all phenomena, which ultimately defines the limits and nature of its inquiry. This is the problem that plagues all of us: identification is the essence of nursing research and of the common elements and threads that give coherence to an identifiable body of knowledge" (p.113).

If the intention is to move towards an evidence–based health care culture, then it is essential that a critical mass of health care professionals are either in a position to conduct research or to implement published research findings. However, both activities rely for their success on a common understanding of the appropriate parameters by which these processes are undertaken. A lack of collective agreement about the nature of research and its procedures may lead, on the one hand, to an unsystematic and faulty application of research in both contexts or, on the other, act as a significant deterrent to nurses undertaking any form of research activity.

One issue, which has yet to be fully addressed, relates to the lack of common understanding or definition of research within nursing. In the absence of an agreed core

of training which addresses research clearly and in its widest sense, many nurses who qualified before the era of academic accreditation have had to rely on alternative information sources, such as the professional and popular press. While there has been extensive media coverage concerning the importance of evidence-based treatment for enhanced health care, the concept of research has rarely been made clear, or openly interpreted by nurses. If there is no common understanding of what research is, what it involves and its scope for enhancing the quality of service provision, then the whole approach will become fraught with misconceptions, errors and false assumptions.

The contention that the whole concept of research in nursing is confused was explored in a study conducted by Hicks and Hennessy (1997), which set out to investigate the training needs of primary health care professionals. However, in one part of the study (semi-structured interviews with doctors, practice nurses, health visitors, physiotherapists, and community service managers), the researchers focussed on a range of issues relating to research. The findings indicated that there was no common understanding, either within or between these professional groups, of what defined or constituted research. Research methodology was understood by a third of the respondents to be a systematic approach to collecting information, while the remainder perceived it as some variant of the experimental method. While one must treat these findings with caution, as they represent only a small section of a overall study designed for other purposes, they nonetheless reveal a potential source of difficulty in the move towards wide-scale and routine adoption of evidence–based practice.

Because nursing is a social practice whose focus is on caring, and which takes place in a complex and dynamic social world, there is wide recognition that a single perspective on epistemological development is inadequate. The nature of nursing practice is such that there is an ongoing requirement on the part of practitioners to base decisions for actions on consideration of a number of possible alternate courses of action which situational contingencies throw up. It is hardly surprising that eclecticism has become the accepted attitude to perspectives on epistemological developments. Nor is it surprising to find that nursing has sought to establish an epistemology of practice, which attempts to transcend these paradigms, and, in this way, more adequately to account for the complexity of practice.

However, nursing has often been hesitant in its adoption of quantitative or experimental methods. This hesitancy, it is argued, has been influenced by a stereotyped view of quantitative/experimental methods which equates them with methodological and philosophical stand seen as harmful to, or problematic within nursing research. Bonell (1999) argues that such logic is flawed and that

> "..any acceptance of the wider influence of these views on nurses could lead to greater marginalisation of nurses in research and evidence-based practice initiatives, thus perhaps leading to evidence-based nursing being led by other groups" (p. 18).

In nursing itself there has been a growing belief that a pluralistic approach to the enhancement of nursing knowledge is required, and yet there is also a need to identify the qualities by which scientific evidence in various forms can be evaluated. As a discipline, nurses have become more discerning about what constitutes 'good science' or 'good

scholarship' and they are beginning to question the worth of much of the knowledge previously generated.

A fundamental assumption in science is that knowledge claims must be warranted, that is criteria or evidence must be brought to bear to justify these knowledge claims. Schultz and Melesis (1988) contend that each warrant must be consistent with the paradigmatic perspective used to generate that knowledge. In contrast, Schumacher and Gortner (1992) argue that the type of evidence or warrants for science should depend on the specific phenomenon and the question posed, not on the paradigm. Currently, consensus among nurse scholars has not been reached regarding suitable qualities for accepting or rejecting the evidence arising from nursing science endeavours. Further, work towards consensus is complicated by the diversity of paradigms for scientific inquiry in nursing.

In their drive to modernise the NHS, the current Government has instigated a number of measures to promote quality, efficiency and effectiveness, and in so doing has given considerable thought to the means necessary for changing clinical practice based on research evidence. These measures include a strategically managed programme of research in the form of the NHS Research and Development Strategy, the availability of research based reviews from the National Center for Reviews and Dissemination, the setting up of the NHS Research and Development Workforce to develop research capacity, constructing frameworks and standards and services, and an inspection system to monitor research implementation (DoH, 1999).

It is thus clear that research evidence as a basis for service delivery has now been formally operationalised within the structures of the NHS and, the role of developing the

research base for nursing has become part of a strategy for strengthening evidence for health care in general. As the emphasis has turned towards effective and measurable outcomes in health care, research has become an ideal vehicle to provide information on cost-effectiveness. Indeed, it could be argued that evidence-based clinical guidelines have emerged out of this evaluative culture and have the potential to be an effective means of managerial control. This in turn has had an effect on the focus of research activity, which has moved away from academic interest towards generalisable contributions to knowledge (DoH, 1993). The research culture in the academic institutions has also had to adapt to a number of wide reaching changes and it is to this that we now turn.

Institutional changes in Higher Education

Traynor and Rafferty (1998) provide an excellent overview of the major changes that have taken place in education since the end of the Second World War. Briefly, the higher education system has been changing from being a relatively elitist system to mass education, focusing on the need for a suitably prepared workforce. The Great Britain Committee on Higher Education (Robbins Committee) (1963) made recommendations that resulted in the development of a dual system of local authority controlled technical colleges, which worked alongside the university sector. Universities recruited on a national basis while technical colleges were regionally focused as well as locally funded.

During the 1980's, under the Council for National Academic Awards (CNAA) the newly created polytechnics were able to award the same academic qualifications as the universities in a range of subject areas. Other influences, including the increasing expansion of student numbers, changing patterns of student support, the removal of the

polytechnics from local authority control, and the development of new funding systems, created a convergence of the polytechnic and university sectors, although there remained considerable variation in the roles being played by different institutions.

The Jarrat Report (1985) called for more transparent distribution of funding and a variety of new financial controls, including improved management within universities and the introduction of performance indicators. Universities were also encouraged to seek more funding from the private sector. This rapid expansion of higher education led to a greater divergence between and within institutions. It was at this point that additional professionally orientated subjects, such as nursing, were added to the university curriculum.

Along with the general financial changes outlined above, in 1985 the University Grants Committee issued guidelines on its new exercise in research selectivity. The Government decided that high quality research could not be maintained without some degree of selectivity of funding, and proposed that funding councils should distribute research monies according to their assessment of a department's research excellence, rather than being built into the unit of resource on the assumption that all academics carried out research as an integral part of their role (Jarrat, 1985).

Starting in 1988, all institutions were assessed every four years, in terms of their research excellence and allocated funds accordingly (Pollitt, 1993). Former polytechnics, and the great majority of nursing colleges, which were in the process of being integrated into the higher education system, participated in the 1992 research exercise. However, this resulted in much criticism, as the initial criteria used in this assessment were not made

explicit. During the late 1980's, the desire for central co-ordination and control of research funding led to the suggestion that the funding councils should be merged into one (Becher and Kogan, 1992), leading to the emergence of the new universities of the 1990's.

More recently, the National Committee of Inquiry into Higher Education, chaired by Dearing (1997), made recommendations on

> "how the purpose, shape structure size and funding of higher education, including support of students, should develop to meet the needs of the United Kingdom over the next 20 years, recognising that higher education embraces teaching, learning, scholarship and research" (National Committee of Inquiry into Higher Education, 1997, para 1).

Two of these recommendations in particular are highlighted by Traynor and Rafferty (1998) as having direct relevance to nurse education - tuition fees and research funding. One of the most controversial recommendations in Dearing was that students should contribute towards the cost of their tuition. However, shortly after the report was published the Government agreed that nurses undertaking degree and diploma programmes would be funded by the National Health Service (NHS) through the decentralised Education and Training Consortia.

The Dearing Report (1997) also suggested that the RAE was addressing interdisciplinary research inadequately and indirectly discouraging collaboration, and recommended that the next RAE be amended

> "..to encourage institutions to make strategic decisions about whether to enter departments for the Exercise or whether to seek a lower level of non-competitive funding to support research and scholarship which underpins teaching" (para 57).

The danger with this proposal was that as many nursing departments were still in the early stages of development in relation to research, they would suffer a loss of academic credibility. Consequently, nurse education now found itself in a position of having rapidly to develop its research capacity, and part of that development related to the education system in nursing.

Nurse education before Project 2000

Against this background of concern about the learning and teaching of research and the development of research skills in nursing practice as a whole, the continuing development in the role of the nurse presented nurse education with a number of challenges. With the exception of a few academic departments of nursing established in higher education during the 1960's and 1970's, the majority of nurse education in the UK took place in institutions concerned with health care delivery only. The establishment of a nurse teaching unit at the University of Edinburgh in 1955 laid the foundations for the first degree-based courses in nursing in the UK and led to the establishment of the first undergraduate degree course for nurses in 1960. The decision to promote degree-based education for nurses met with some opposition, with the Scotsman in 1954 arguing that standards would be lowered by admitting to degrees people with *no true academic qualifications* (Traynor and Rafferty, 1998, p. 20).

However, for the majority of nurses, the apprentice system prevailed in nursing until the development of Project 2000. The pre-registration programme of education was based on an apprentice-type model that focused on gaining knowledge and skills on site under the guidance of a skilled supervisor (Beckett, 1984). Programmes were based on periods of

clinical experience, mainly hospital-based care, with blocks of theory in health service education settings (UKCC, 1990). As only between 24 and 28 weeks were devoted to teaching (GNC, 1969, circular 69/4/3), and an autocratic style pervaded schools of nursing, traditional didactic teaching styles were employed. The remainder of the student experience was practice-based with student nurses providing three-quarters of all bedside nursing care (DHSS, 1972).

In relation to nurse education, the Briggs Report (DHSS, 1972) recommended that clinical placements of students should be controlled by the training institution, that specific learning outcomes for each placement should be consistent with the theoretical input preceding the placement, and that students should practice in a firmly controlled environment. In this way, it was felt that the disadvantages of the existing system would be overcome (UKCC, 1985). However, the report failed to recommend any radical changes to the apprenticeship style of nurse education because of financial considerations, and suggested that student status should be viewed as a long-term goal (Naish, 1993). As a result, although a modular scheme of training was implemented, students continued to be apprentices. Between 1976 and 1979 research both the General Nursing Council (GNC) and the Royal College of Nursing (RCN) provided evidence to the Royal Commission on the National Health Service, but with contrasting suggestions. The former proposed that the nurse trainee remain an employee of the NHS, whilst the latter argued for student status for nurse trainees (Jacka and Lewin, 1987).

As research into nurse education developed, the underlying assumption of the practice-based model of training nurses was openly questioned (Fretwell, 1982; 1985; Orton,

1981; Jacka and Lewin, 1987). Fretwell's (1982) study highlighted the role of the ward sisters in creating a positive learning environment but pointed out their lack of formal education for that role. Additionally, an increased clinical workload reduced the time for clinical teaching creating doubt about the level of support received by the student group. There was also concern about the emphasis on psychomotor skill acquisition and task-centered approaches that was inhibiting individual opportunity for acquiring wider knowledge (Fretwell, 1983; Melia, 1987; Fish *et al.,* 1991). The emphasis on the performance of activities, with little time for reflection, was undermining the potential for learning (Orton, 1981; Ogier, 1982; UKCC, 1983).

Chapman (1980) explained the conflict that students experience in such situations. Due to the pressure of work, students become fixated on task performance, with neither the time nor the inclination to consider the rationale for their actions, thus impeding their education. As an alternative, the combination of theoretical periods with associated practical experience was commended for its ability to increase the application of theory to practice (Alexander, 1983). Interestingly, while nurse education has chosen to move away from the practice- based model of education, other areas of professional preparation, such as teaching, have moved towards a practice-based curriculum in an attempt to enhance the acquisition of skills and reduce the theory-practice gap (Jowett, 1995).

The longstanding acknowledgement of the problems associated with the training schemes in which students were paid employees, combined with a fear of shortage of numbers of young people entering nursing during the 1990's, resulted in the publication of three

reports (RCN, 1985; ENB, 1985; UKCC, 1986). The most radical of these (RCN, 1985) recommended a complete transfer of nurse education into the higher education sector (Lelean and Clarke, 1990). According to Naish (1993), it was only then that there was a true impetus for student status. The recommendations, accepted by the Government with some amendments, resulted in Project 2000 (UKCC, 1986).

Project 2000

In 1984, the UKCC initiated a review to determine the education and training required for nurses, midwives and health visitors in relation to the projected health care needs in the 1990's and beyond (Elkan and Robinson, 1993). This review culminated in '*Project 2000 - a New Preparation for Practice*' (UKCC, 1986) and amongst the recommendations was the complete separation of education from service, with supernumerary status for nurses being seen as a means of enhancing the educational standard (UKCC, 1986). The new system, while still providing practice and classroom based education, demonstrated a move away from the old apprenticeship model towards a new, and educationally led, research-based programme. Key features of the new arrangements were that nurses would have full student status in a university setting, receive bursaries rather than a salary, and be considered supernumerary to the workforce during practice placements with a service contribution of only a fifth over the three years of study.

A fundamental change with the inception of Project 2000 related to its academic level and subsequent programme content. In addition, mentors were identified in the clinical environment to facilitate the application of theory to practice. Specific training programmes were implemented for the mentors in light of the major changes which had

taken place in the education programme. The intended outcomes of Project 2000 have been to produce critical, problem–solving, autonomous professional and knowledgeable nurses who are able to respond flexibly to different situations (UKCC, 1986). The learning processes associated with the curriculum have been based on those of adult learners, increasing knowledge through reflection on experience (Schön, 1983; Boud *et al.*, 1985) and the development of self-direction and independent working. The strength of this rhetoric has, however, created considerable difficulties for nurse educators who have faced radical changes in their role.

The demise of the old apprenticeship model of nurse preparation with its close links to practice was seen as the end of service-driven nurse education, and the establishment of links between nursing and higher education institutions. Witz (1994) commented that the introduction of the Diploma of Higher Education programme represented a bid to enable "greater control by nurses over what is taught, how it is taught, and crucially, where it is taught" (p.28). But the reality has proved somewhat different. A further, unanticipated and more far-reaching problem came from the proposals to reform the NHS in 1989. The Working for Patients Working Paper 10 (DoH, 1989) proposed new arrangements for non-medical training. The combined schools of nursing, which were being amalgamated into the higher education system, also had to contract with local health care providers to meet the mix of staffing and skill needs identified. The introduction of the purchaser-provider split, and the advent of educational contracting, meant an increase in the power of service to determine the future shape of nurse education and a diminution of the influence of the educational institutions.

Roques (1996) outlines the changes in educational culture which took place as educational institutions came to terms with both a customer focus and a market culture, neither of which fits comfortably with the notion of academic freedom. Courses could no longer be determined by educational criteria alone, irrespective of changing needs in clinical practice. It may be argued therefore that the power of service *vis-à-vis* nurse education has never been greater. Service providers perceive their needs in terms of specific clinical skills and psychomotor competencies. Such needs, by their very nature, are reductionist and are potentially at odds with the ethos of Higher Education.

As we have seen the movement of all pre-registration nursing programmes into Higher Education, changes in the NHS and higher education systems, and the increasing diversity of background of students entering nursing has led to the introduction of new approaches and expectations from nurse education institutions, students and future employers. Additionally, the need for nurse education to develop its evidence base and incorporate research into the Project 2000 curriculum have presented major challenges for educators.

The next chapter begins by examining the research-based information that was available to educators in relation to teaching research as they developed and subsequently delivered the research component of the Project 2000 Programme of Education. As we shall see, that research base was underdeveloped and relied excessively on American studies, which has added to the difficulty of integrating research into programmes developed for Project 2000.

The structure of the thesis

Having provided the background for the study, Chapter 2 explores previous research concerned with and related to research in nurse education. The second part of the Literature Review, contained in Chapter 3, then aims to give teaching and learning in Higher Education a theoretical grounding, providing a brief overview of the most relevant psychological theories of learning, followed by a detailed discussion on research on student learning. These studies provide insights into the purposes and processes that students may be pursuing in their experience of learning about research, and the expectations they may possess concerning how this learning should be organised.

An investigation into the conceptions held by both teachers and students requires the research to be conducted from a 'second order' perspective. The way teachers think about teaching and the way students think about learning cannot be observed. A recently developed second-order qualitative approach known as phenomenography (Marton, 1981; 1986), which has been used extensively in research on student learning, has been adapted for this study. The phenomenographic approach is discussed in detail in Chapter 4, while its adoption to the present study, and other aspects of the research design and methodology are described in Chapter 5.

The data collected in interviews with students and staff were analysed using a qualitative technique similar to that used in phenomenography with the results presented in Chapters 6 and 7 from the separate perspectives of the students (Chapter 6) and the staff (Chapter 7). The final chapter summarises the main findings that emerged from the analyses and develops a conceptual model of the influences on the quality of learning achieved. The

final chapter also provides a reflection on the study which addresses its limitations. It is argued that, in addition to contributing to other research conducted on Project 2000 this thesis has broken new ground in developing and describing in detail a form of phenomenography that allowed the various influences on the quality of learning research in nursing to be explored in a fully contextualised and holistic way. Finally the conceptual model that has been developed from the research findings provides a framework for lecturers and those involved in curriculum development to consider the various influences that affect student learning about research within nurse education.

Chapter 2

A Review of Research in Nurse Education

Studies related to research in nurse education prior to Project 2000

The literature cited in this chapter relates to research carried out prior to the development of Project 2000. As this was the only literature available to lecturers as they developed the curriculum, it serves to put this era in context. As the previous chapter demonstrated, the desire to integrate nursing research findings into nursing curriculum is a major concern for nursing education. Yet, despite this interest Tanner and Lindeman (1987) found no review articles on the topic and were unable to locate any studies directly addressing that issue, and several other authors have noted the need for further research on teaching students to utilize research findings. Fulton (1987) claimed that little had been published about students as consumers of research and how they might apply research findings in practical ways in order for learning to be meaningful, while Roberts and Crook (1987) suggested that curriculum developers were continuing to wrestle with questions about what knowledge and skills are required for nursing of research and how this subject can be taught and learned most effectively.

From a teaching perspective, Beal *et al.*, (1989) claimed that limited information was available on how lecturers might select learning experiences that fostered development of students' skills as critical consumers of nursing research. Champion and Leech (1989) urged changes to facilitate the utilisation of research findings, claiming that the final step in the research process - utilisation of nursing research - needed to become a priority as nurses endeavored to increase their professional status. In the same year, Renner (1989)

stated that new strategies were needed to involve nurses more deeply in the research process, both as students and professionals.

Prior to and during the introduction of Project 2000 there was a sense of urgency in finding meaningful ways to integrate nursing research findings into the curriculum. There was considerable agreement that students and practitioners need to increase their utilisation of research. It was also agreed that integrating nursing research findings into curricula in ways that demonstrated the importance and applicability of research to improving client care was one way of achieving evidence-based practice.

The review of the literature revealed that both practitioners and educators were concerned about the dissemination and utilisation of nursing research findings, with several studies looking at variables influencing the utilisation of research findings by practicing nurses. This literature was included in this review since most of the studies included implications for nursing education, and indicated how successful differing nursing research classes had been.

Research articles pertaining to integrating nursing research findings into the curriculum often addressed methods of teaching students to be critical consumers of research studies or investigated students' attitudes towards research. Some of these studies directly or indirectly addressed students' perceptions of the value of research findings in improving client care and their perceptions of their abilities to apply research findings. In addition to the research literature, other articles described methods of teaching research. These differing aspects are now explored in turn.

Early studies on research utilisation

Investigation on research utilisation in nursing practice began in the early 1970's and has continued to the present. Most earlier studies were conducted in America, although some studies were based in the UK (e.g. Myco, 1980; 1981). Intervention studies designed to evaluate the impact of specific strategies on research utilisation included state funded projects (in America) such as WICHEN (Ward and Lindeman, 1978) and CURN research utilisation programme (Horsley, 1983) from 1975 until 1980. The WICHEN project helped nurses to critically review research and apply findings to client care during a three-day workshop. The CURN (Horsley, 1983) project demonstrated that a research utilization programme could be successful in increasing staff nurses' awareness of research findings and utilisation of these findings.

Additional intervention studies by Goode *et al.*, (1987), Wake and Gotch (1985) and Warmuth (1986) demonstrated that research-based workshops that specifically addressed nursing research findings could have a positive impact on research utilisation among staff nurses. The impact of the workshops and continuing education activities was also evaluated by Butler (1986) in a correlational study, and by Warmuth (1986) in a descriptive study. Butler (1986) found a significant positive association between nurses' knowledge of a specific innovation and their participation in continuing education activities. Warmuth (1986) found that nurses used information from a workshop in various ways and suggested that continuing education courses may be much more effective than previous studies had shown.

Three descriptive studies investigated staff nurses' awareness of specific and widely reported research findings (Brett, 1987; Ketefian, 1975; Kirchhoff, 1980). With the exception of Ketefian's study, the results indicated that staff nurses, in general, were aware of research findings, although this awareness did not necessarily impact on their practice.

Several researchers identified and described barriers to utilising research findings in the practice setting (Miller and Messenger, 1978; Bostrom, 1987; Bostrom *et al.,* 1989; Champion and Leech, 1989). Major organisational barriers included lack of authority or control to institute changes, lack of time to conduct research or apply findings and the perception that the institution does not reward application of research. Obtaining research findings and their implications for clinical practice, understanding the technical language of research reports, and a lack of involvement in research activities, were all reported as barriers by nurses.

Access to research findings have been investigated and described by a number of writers (Miller and Messenger, 1978; Loomis and Crane, 1979; Myco, 1980; Myco, 1981; Stokes, 1981; and Champion and Leech, 1989). The researchers found that staff nurses generally subscribed to clinical journals rather than research journals. The majority could not or did not attend research conferences. Many nurses did not utilise libraries or other sources of information, and most were not involved in specific research activities in the work setting. Strategies for improving research dissemination of nursing research findings included reporting more studies in clinical journals, discussing published research as part of on-going in-service within the work place, developing resource centres

in hospitals and employing clinical nurse researchers who could help nurses understand the utilisation process. Staff nurses' attitudes toward nursing research were investigated by Bostrum *et al.*, (1989) and by Champion and Leech (1989). Results of both studies indicate that attitudes towards research and research utilisation were generally positive and related.

Studies related to teaching and learning about research

In the university setting, several investigators have examined students' attitudes toward research (Brogan, 1982; Thiele, 1984; Champion, 1988; Selby and Tuttle, 1988). Thiele (1984) found that early placement of research in the curriculum is positively and significantly associated with positive attitudes toward research. A number of intervention studies have been conducted (Spector and Bleeks, 1980; Brogan 1982; Swenson and Kleinbaum, 1894; Champion, 1988; Selby and Tuttle, 1988; and Larson, 1989). Brogan (1982) found no improvement in graduate students' attitudes toward research following a research course utilising 'Guided Design' as a specific teaching method, while Swenson and Kleinbaum (1984) reported a more negative attitude toward research in undergraduate students following an introductory course in research. But Champion (1988), Larson (1989), and Spector and Bleeks (1980) all found that undergraduate students' attitudes toward research was more positive following a research course which utilized specific teaching strategies designed to help students apply findings to practice.

Kramer *et al.*, (1981a) reviewed the literature on teaching research in several disciplines. They found that an important objective in most undergraduate programmes is to prepare students as users of research. They also found that while lecturing is a common method

of teaching research because it accommodates large groups, small group discussions are preferred when the intent is to positively influence students' attitudes toward research. Kramer *et al.*, (1981b) also found that role modeling, as a teaching strategy, was more effective in producing high quality research proposals by staff without doctorates than a small group discussion. However, small group discussions were more effective in producing attitudinal changes than was role modeling. On the basis of this intervention study, the investigators concluded that a combination of these two strategies would be ideal for teaching research proposal development and influencing attitudinal changes toward research.

Several investigators surveyed nursing programmes or individual teaching staff to determine the emphasis of research and research utilization within the curriculum (Thomas and Price, 1980; Murdaugh *et al.,* 1981; Firlit *et al.,* 1987; Swanson *et al.,* 1988). Thomas and Price (1980) and Murdaugh *et al.*, (1981) found that the vast majority of undergraduate programmes made provisions for teaching research, and the emphasis throughout most curricula was preparing students to be intelligent consumers of research. Swanson *et al.,* (1988) described teaching staff commitment to research and activities used to integrate research findings into the curriculum. This study was the only one of this group of studies to address ways of integrating research findings into the general curriculum rather than a specific research course. Firlit (1987) specifically investigated the extent to which the research utilisation process was incorporated into graduate programmes. Almost all of the graduate schools reported teaching research utilisation content, but few could indicate the number of hours that were devoted to this content or provide titles of readings related to research utilisation.

Much descriptive literature on teaching the research process and research findings exists. Many authors described 'learning by doing' (Brand, 1987; Damrosch, 1987; Roberts and Cook, 1987; Beck, 1988; Pinch, 1989). This approach involves students directly in some aspect of the research project, whether a review of the literature, data collection and analysis. Generally, educators perceived this approach to be effective in teaching the research process and/or positively influencing students' attitudes toward research.

A second method of teaching the research process is the 'learning by proposing to do' approach described by Fleming, (1980) and Laschinger *et al.,* (1990). This approach requires students to develop a research proposal that might be carried out at a later date. It was also perceived as an effective learning activity. Two educators also described the 'learning by critiquing' approach (Castles, 1984; Mallick, 1983) in which students consider published research studies in terms of methodological procedures and evaluate findings for application to practice. This approach was considered as effective for developing consumers of nursing research. A few educators described using a combination of these approaches, generally over more than one semester or term (King, 1972; Martocchio *et al.,* 1972; Swanson *et al.,* 1990). Specific advantages to using specific approaches were described, including giving students more confidence in critiquing and conducting research.

Some studies specifically described strategies for teaching about research findings rather than the research process. These included lectures, discussions, and small group projects involving elements of the research utilisation process (Kirchhoff, 1984; Firlit *et al.,* 1986; Renner 1989; Stetler, 1989); simulated poster sessions (Beal *et al.,* 1989); observation

during clinical placements in which students verified published findings (Harrison *et al.*, 1987; Neidich, 1990) and findings related to students' clinical experiences in lectures or classroom activities (Ludeman, 1981); participant observation in research activities during clinical placements (Dean, 1983); critique of research articles in class with emphasis on how findings can be applied to client care (Perry, 1986); having nursing students apply selected research findings on Type A and Type B personalities to themselves during class (Fulton, 1987); investigating the rationale for particular nursing protocols during clinical placements (Feldman, 1988); role-play experiences in which students tried to convince peers to utilise selected research findings in client care (Levin, 1988); and using nursing research findings (role modeling) to teach research utilisation in clinical settings (Beal *et al.*, 1989). Advantages of most methods included exposing students to a variety of research findings and allowing them to see how these could be applied to specific client care situations.

Although the nurse education literature describes many learning activities to use in teaching both the research process and nursing research findings, few studies have been described the extent to which these activities are actually used, and what the most effective activities might be. Consequently, a study which examined the perceptions of teachers in their role in delivering the research curriculum, and, students in their role as recipients, was believed to be valuable in exploring how nurse education is addressing the research agenda in practice. It could also help to set the teaching of research in nursing within a much firmer conceptual framework.

Research studies related to Project 2000

Although there was a clear recommendation in the Briggs Report (DHSS, 1972) that 'research awareness' should be fostered in all levels of nursing, little evidence exists of any early attempt to introduce research into basic nurse education. According to Jolley and Allen (1991) there are many reasons why there has been a dearth of nursing research. The organisation of nurse training and its hierarchical structure mitigated against a questioning approach, and encouraged a reliance on rule-keeping and known practice.

Much importance was, attached however to the research element of the new programmes introduced in response to Project 2000. In particular, one of the core objectives of the new programme was that the nurse would be empowered to 'select and evaluate research based literature in order to influence nursing practice' (NBS, 1990). Implicit within this statement was the expectation that the new programme would equip nurses to appraise current practice using research findings and act, to some degree, as agents of change. There were research expectations for students both at the early and final stages of the programme. In the first year, programmes were required to include factors influencing the development of nursing practice, including research methodology and its application (NBS, 1990). At this stage, there was no explicit requirement that students would begin to apply research findings to practice, although this was required for the second half of the programme. As we have seen, the proposal for Project 2000 to be research-based in both teaching and practice demonstrated a step in the direction of a research-based profession. It is surprising, however, that as research was now considered an essential part of the role of the future nurse, and as the education of nurses was moving towards

the university setting, it was not included in the seven stipulated themes which formed the basis of the diploma programme.

As previously identified in Chapter 1, the introduction of Project 2000 paralleled the general integration of nursing education into Higher Education. The NBS (1990) believed the benefits of the links with Higher Education would "provide both students and staff with exposure to a wide range of ideas which will be conducive to education at diploma level" (p.7). In addition, it was felt that such linkage could "facilitate the development of a research environment within the colleges, in particular it may address any requirements for staff access to research and to research opportunities" (NBS, 1990, p.7).

Numerous research studies were conducted during the implementation of Project 2000, the majority of which were evaluations. While these studies were all examined as part of the review of the literature, only one directly relates to the current study. These studies do, however, demonstrate the way in which research activity in nurse education has been developed. The majority of the studies were qualitative in nature, and given the newness of the situation, it was not surprising that they were also exploratory. Areas addressed included the implementation of Project 2000 (Jowett *et al.,* 1994), transition from foundation studies to the branch section of the programme (Bradby and Soothill, 1993), and participants in Project 2000 (Ramprogus, 1995). Several studies focussed on the analysis of conceptions of the role of teacher, supporter, mentor and supervisor (Davies *et al.,* 1994; White *et al.,* 1994), while others focussed on the perceptions of Project 2000 students and staff (Watson and Kieger, 1994; Clarke *et al.,* 1996).

May *et al.,* (1997) report the only major study that has direct relevance to the current study. It was conducted in Scotland on the Project 2000 programme of education and examined the teaching and learning processes of the Diploma of Higher Education in nursing and midwifery courses, and their relationship to the individual outcomes for individual students. The research team used an 'illuminative evaluation' as their methodology in six of the twelve colleges in Scotland. Data collection techniques included group and individual semi-structured interviews, non-participant observation, and documentary analysis. Although the findings related to a broad range of aspects of the Project 2000 programme, few were directly relevant to this study.

The research team concluded that evidence in relation to the research basis of the program was 'sparse and equivocal'. Moreover, they reported "many research-based rationales appeared to be a required for some of the course work assessments although they seemed not to be required in examinations. They also identified apparent missed opportunities to make overt the research base of the programme" (p. 377).

Nurse teachers

More specific to the present study are a series of small-scale investigations into the changing role of nurse teachers. Alongside planning for pre-registration education needs, there was also a focus on the continuing education of nurse teachers. The Project 2000 documentation (UKCC, 1986) contained specific recommendations relating to the role and preparation of nurse teachers. In essence, staff were expected to have an up-to-date understanding of the practice settings, a detailed advanced level of knowledge of theory, practice, and research in the area in which they were to teach, possess a qualification in

teaching at degree level, and to teach in both the university and a practice setting. *A Strategy for Nursing* took the recommendation further and set a range of strategic aims for nursing to ensure that future nurse teachers would be "qualified or clinically credible in the area of practice they teach" (DOH, 1989, p.38). This was reinforced by *The Future of Professional Practice* document (UKCC, 1994), which stated that those who were educating practitioners must themselves be both clinically credible and knowledgeable about contemporary practice and research, thus placing added pressure on nurse teachers.

Given the rapid pace of change, it is not surprising that the implementation of the Diploma Programme created a number of significant problems for the teaching teams. The programme aimed to produce a thinking practitioner, who was required to develop reflective skills (UKCC, 1986; Schön, 1983). Furthermore, staff were to encourage the students to use self-directed learning techniques, as these had been shown to improve the quality of learning and student motivation, as well as being an appropriate teaching strategy for adult learners (Jones, 1998; Knowles, 1990).

As the students were now entering a Diploma Programme, there was an expectation that the students' educational entry qualifications would also improve. In reality, the reverse occurred as higher education institutions aimed to meet the UKCC's (1987) target for widening the entry into nursing. Consequently, teachers faced groups of students with a wider range of educational abilities and that posed problems for all concerned (Jowett *et al.,* 1992; Elkan *et al.,* 1993).

A number of research studies sought to explore the new role of the nurse teacher in the evaluation of Project 2000. Some were specific in their focus on teachers and their lack of

preparation for the new role (Clifford, 1992; 1993; Baillie, 1993; Crotty, 1993), while in others the examination of the teachers' role formed part of a wider study on the implementation of Project 2000 (Payne *et al.,* 1991; Robinson, 1991a). The inauguration of the Diploma in Higher Education, and the subsequent move into Institutions of Higher Education, have led to high levels of reported stress among nurse teachers (Payne *et al.,* 1991; Robinson, 1991a; Elkan and Robinson, 1993). One study (Robinson, 1991b) suggests that the high levels of stress are a result of role confusion, overall uncertainty, and lack of direction. Other studies (Payne *et al.,* 1991; Elkan and Robinson, 1993; White *et al.,* 1994) have indicated problems associated with conflicting demands on teachers' time and lack of preparation for their new role (Clifford, 1995; Luker *et al.,* 1995).

Other difficulties included the teachers' lack of experience of teaching at diploma level prior to the introduction of Project 2000 and their subsequent lack of understanding of the academic level required (White *et al.,* 1994). In addition, the growth in the emphasis on reflection through self-directed study, individualised tutorials, and small group work sessions proved difficult as large cohort sizes, and the restricted physical environments in the majority of areas mitigated against such learning (Payne *et al.,* 1991; Elkan *et al.,* 1993; Jowett *et al.,* 1994; Luker *et al.,* 1995).

Nurse teachers within the higher education system

In comparison with the role of the nurse teacher highlighted above, the traditional academic's role in higher education has comprised a unity of teaching, research and administration within a collegiate system of control (Blaxter *et al.,* 1998; Dearlove, 1997). Values of professional autonomy and academic freedom have been strongly felt

and defended (Halsey, 1992). Academic identity has been defined in terms of a work organisation based on reputation maintained by a system of peer review, and academics have usually been judged by the principles set by their discipline, not by the institutional needs of their employers (Whitley, 1984).

Not surprisingly, numerous studies have been carried out to investigate the changing role of nurse educators in relation to higher education and the implications of the need for an ability to be involved in research activity at differing levels (Jowett *et al.,* 1994; Camiah, 1997; 1998; Traynor and Rafferty, 1998). Luker *et al.,* (1995) conducted a three-year project aimed at describing the evolving role of the nurse teacher in light of the education reforms outlined above and found that only some two per cent of nurse teachers had a research degree. Others (Clifford, 1993; 1995; 1997; NBNI 1990; Jowett *et al.,* 1994) examined the preparation and attitudes and orientation towards research of nurse educators in this new role, while a survey conducted by Traynor and Rafferty (1998) emphasised that one of the major issues facing nurses in the university context was the need for an improved research capacity.

The conceptual basis of the theory-practice gap

The nature of the relationship between theory and practice is one that has long been of concern to practitioners, philosophers, researchers and those engaged in and concerned about the education and training of practitioners. To practitioners and to their educators, the concern has tended to focus on efforts to achieve greater theory-practice integration and, more specifically, to promote practices that best express theoretical positions and propositions, principles and prescriptions. For researchers, the concern has also been with

theory-practice integration. Researchers have tended to explore the extent to which practice reflects theory and more recently they have been concerned with ameliorating problems associated with dysfunctional theory-practice relationships.

While the nursing literature is abundant with philosophical discourse on the nature of nursing practice, and theory and on their interrelationship, to date there have been few attempts to summarise and to characterise the various ways in which the theory-practice relationship is understood within nursing.

Early proponents of an evidence-based approach argued that nursing needed a "unified and valid abstract system of thought in order to describe, plan and evaluate nursing care" (Brown, 1992 pp.13-14). Contemporary philosophers of nursing have adopted positions that are unambiguously explanations of a particular vision but can be diametrically opposed to each other. Walker (1992 p.37) for example views theory and practice "as two distinct and legitimate endeavours". Opposing the theoretical and the practical in this way, Walker (1992) is able to offer an account of the theory-practice relationship in nursing as one in which theory serves the more narrow and immediate purposes' of practice. Her conception of the relationship is based on a rejection of two notions, namely that practice is the testing ground for theory and that observation of clinical practice offers a 'well-spring' for theory development.

This separation of theory and practice has its origins in ancient Greek philosophy (Allmark, 1995). Theory was described as being concerned with observation, while practice was associated with doing, and little connection was expected as each required different types of knowledge. There are still some writers today who suggest that nursing

is practice-based and does not need theory (Sandelands, 1991; Scott, 1994), but the more accepted view is that the two cannot be separated (Pryjmachuk, 1996). As nursing began as a practice-based discipline with no formal theoretical knowledge of its own, it has adopted the theories of long established disciplines, especially those of medicine and the social sciences to define and influence its practice. These theories have given nursing a more scientific base (Robinson, 1992) through which to achieve academic credibility.

Practice as applied to nursing is too often viewed as a process by which skill is gained by repetition. However it is increasingly being recognised that practice in nursing is delineated by complexity at several levels (Bjork and Kirkevold, 2000). These complex levels have less to do with tradition, supposition and nursing care (Tonuma and Winbolt, 2000) and more to do with skill acquisition and theory linkage - that is producing evidence for the practice. Edmond (2001) agrees with this concept, arguing that practice involves thinking and doing, as well as reflection and judgement. This links in with the views of Benner (1984) that nursing practice moves from the simple to the complex as expertise develops.

On an individual basis, expertise through practice will depend on many variables such as personal learning ability, and experiential learning exposure. It is likely therefore, as in any employment, that there will be much variety in the range of practice available in the clinical environment. As a consequence, learning and practice for the novice will be subject to these variables (Hicks and Hennessy, 1999) and it is within this understanding of practice that the current emphasis on accountability must be viewed.

The conceptual basis of theory and practice in nursing

Not only have there been disagreements about the conceptual basis of theory and practice in nursing, there have also been debates about the roles of nurse educators and nursing practitioners (Cook, 1991; McCaugherty, 1991; 1992; Nolan and Grant, 1992). The debate centres around two interrelated factors, firstly, the necessity of a theory-practice gap if learning is to start and, secondly, the need to bring the two together thereafter.

Lindsay (1990) suggests that not only is theory not applied in practice, but some practitioners judge it to be irrelevant. If a gap exists in nursing between educators and practitioners there is no reason to suspect that this has disappeared with the introduction of scientifically proven theories espoused by researchers, a sentiment that is reiterated by Hicks (1997). Therefore the divide between theory and practice also encompasses a research-practice gap.

Theory-practice gap in medical education in relation to research

In the medical model of care there is also recognition of the gap between research and practice (Rosenberg and Donald, 1995) and agreement that some of the research findings are irrelevant and invalid. The proposed solution is the processing of clinical problems into questions, and then using a systematic critical process to examine research and produce an answer. Whilst this approach may be useful to provide evidence-based practice in medicine, there are fundamental differences in its application to nursing.

The process of medical teaching and professional development accepts that theory and research are vital components (Rosenberg and Donald, 1995). Most senior doctors who

work within university teaching systems have a practical clinical remit, which often includes research. This is not to make the assumption that good clinicians make good teachers, or vice versa, but that there is more interconnection between the education, research and practice than is possible in nursing.

Because there are many opportunities for medical educators to integrate research examples into their teaching, and because of the strong research tradition within medicine, it might be expected that medical students would show more confidence and knowledge about research when compared to students from occupations allied to medicine. Yet, even among senior medical students nearing graduation, Stam *et al.,* (1990) found knowledge of basic methodological and statistical concepts to be inadequate. A fundamental element in learning about research, designing one's own projects, or integrating research findings into practice, is the ability to read relevant literature, but Riegelman *et al.,* (1983) found relatively low levels of perceived self-confidence in relation to several aspects of reading research literature in medical students in George Washington University. Their findings indicated that perceived confidence about knowledge of research did not increase from the first to the fourth year of the course. On the basis of their research, Riegelman *et al.,* (1983) concluded that there is a need for specific training in research skills, and also follow-up evaluation of the success of such training.

Riegelman (1986) subsequently trialled a method for reading the medical literature programme, which he evaluated both objectively, and by obtaining rated feelings and competence. While the programme was shown to be successful, over the time between

the implementation in the first year, and the fourth year of the course, ratings and knowledge declined. Riegelman (1986) suggested that this would occur unless specific programmes are provided to reinforce students' knowledge and skills. Such results suggest that unless training in reading the research literature is both extensive and intensive, it may only serve to alert students to the many dimensions that must simultaneously be considered when evaluating research literature, and so lower their confidence.

Delin (1994) conducted a comparative study to investigate the research attitudes and involvement among a substantial sample of medical students and students of allied health professions. She identified differences across the courses in the priority given to research areas, in the criteria used to evaluate research articles, in feelings of competence in reading the research literature and in research involvement. The allied health professionals included nurses, dentists, occupational therapists and physiotherapists.

Evidence suggests that many students have difficulties with research methodology courses during their university education (Forte, 1995; Hauff and Fogarty, 1996; Lehtinen and Rui, 1995). They frequently consider their research methodology courses, especially in quantitative methods and statistics, more difficult than their major subjects and yet little research has been conducted in this area.

One reason posited for nurses' inability to apply scientific research to their daily practice is that to do so, they require more than formal scientific knowledge. This supports the well-established view that theory and practice are dependent upon different types of knowledge. Awareness of individual patient preferences (personal knowledge) and from

previous experiences (experiential knowledge) are also both required, and are essentially tacit or informal knowledge. These forms of knowledge have been described by Clarke *et al.,* (1996) as being involved in professional judgement, and within the clinical area have been found to take precedence over research findings in the decision-making process (Rolfe, 1998). Pryjmachuk (1996) suggests that research can be used to unite theory and practice and proposes a model, which develops the knowledge of both. This model has some similarities to Lewin's (1958) model of action research, highlighting the need for researchers and practitioners to work closely together within the practice setting. This practice theory would allay nurses' fears that evidence–based practice will erode their expertise and clinical judgement. Practitioners need to lead this process, but they rarely have the time, or the necessary skills, to do so. Collaborative research, utilising the knowledge and skills of both researcher and practitioner, would be ideal and could help bridge the gap (Meyer and Batehup, 1997).

In terms of minimising the theory-practice gap, the importance of defining relevant research is considered particularly significant, as it suggests that the practitioners' own knowledge and experience have an important part to play. Within the evidence-based practice approach to research, the focus is determined by the practitioner researcher's personal judgement regarding the aims, relevance, feasibility constraints and significant variables associated with the particular research issue, thus assimilating the tacit knowledge of the investigator. Evidence-based practice encourages the integration of tacit and empirical knowledge by requiring that investigators establish the relevance of previous research for their practice and then validate it within their own context.

Summary

The move to evidence-based practice within the health arena appears to resonate with, and indeed lend support to, long-standing calls within nursing for the development of a research-based profession. Fawcett (1990) and others have argued that, by producing and using research, nurses can further their claims to be treated as an authoritative and autonomous professional group. This chapter has identified from the research literature the efforts and problems experienced by practitioners and managers in their attempts to implement research in practice.

The promotion of theoretical knowledge through research is still an important aspect of nursing's continuing attempt to enhance its status as a profession and to develop a distinctive discourse through which to discuss issues. However, for many, evidence-based practice remains a relatively new concept and raises the question of the extent to which students can apply theory derived from research to their experience within the practice area. If nursing is to become a research-based profession then research must be seen to be embedded within the practice culture. Students' experience of research-based practice in practice is essential to the development of future competent practitioners.

However, there continues to be confusion as to the exact role of the nurse practitioner in relation to research and problems in developing a structure that can maximise this activity. By developing research-based practice and focussing on effectiveness, nurses can demonstrate the unique contributions they make to health care outcomes. Conversely, if nurses fail to become a part of evidence-based health care it is possible that other groups will lead the evaluation of nursing, and the development of evidence-based

guidelines for nurses. As a consequence, nurses may suffer a loss of autonomy and authority.

As we have seen, nurse education has been the subject of widespread debate and controversy for several decades. Much of the debate has been around the appropriateness of the apprenticeship model of preparation, and growing concerns about retention and recruitment. In addition, new demands and expectations of professional practice, in the light of changing health care needs, as well as developments in the delivery of health care services, have had significant implications for the role of nurses. There is still however, rather little evidence that this emphasis has become embedded in pre-registration nursing education programmes.

An increased emphasis on evidence-based care and the move to the higher education system, has meant that the concept of the knowledgeable doer has assumed increased importance, with a corresponding need to develop the research base on which nursing practice ought to rely through a system which promotes and actively encourages that research base. Educational reform in the form of Project 2000 was viewed as a means of meeting such needs. Indeed, the UKCC (1986) promoted the value of the Project 2000 by claiming that each student would leave the programme "a thinking person with analytic skills able to function effectively in a changing health care environment" (p.4).

In outline, the background provided in the previous chapter and this first literature review have highlighted how changes within the Higher Education system and the NHS have had a major impact on nurse education and how these changes are forcing nursing and nurse education actively to increase its research capacity. Yet, while it appears that there

is a consensus within the nursing profession that qualified nurses should be able to critically read and use research findings, there is no evidence to suggest how successful nurse education programmes are in preparing them for this future role (Parahoo, 1998). There is, however clear evidence that many nurse teachers still feel uneasy about in their new roles, and particularly so in relation to research teaching and activity. The current study was designed to investigate the perceptions of teachers in their role in delivering the research curriculum and of students in their role as learners.

Three main aims underpin this study. The first is to investigate the perceptions of mental health nurse students and teachers of the research component of the Project 2000 Programme. The second is to consider the influences of the learning environment on the quality of learning within the research component, as perceived by the participants, and the implications of these influences for the future development of teaching research within nursing programmes. The third aim is to compare the findings of this study with previous research on teaching-learning environments and so to develop a conceptual model to summarise the conclusions reached. From the literature review, it is clear that each of these aims, if achieved, will add to the current state of knowledge not just of the teaching of research in nursing programmes, but also more generally of how teaching-learning environments influence the quality of nurse students' learning. With this in mind we now look at the educational research literature on teaching and learning at university level will now be explored.

Contributions of Previous Research to the Methodology and Theoretical Framework

Introduction

The review of relevant literature that is presented in this chapter has the conventional aim of placing the present study firmly within the context of previous work. To provide a broad view and highlight general issues, rather than getting lost in detail, the research studies that are examined have been carefully selected. The studies were selected to take appropriate account of any large-scale studies which appeared to be relevant and important to the purposes of this thesis.

The previous chapter showed that little research on the influence of the academic learning environment has been conducted in nursing education. There is, however, ample research evidence in education that the manner in which students adapt to the academic and professional demands of university life is powerfully mediated by their beliefs, conceptions and purposes.

Structure of the chapter

The chapter begins with a brief overview of the most relevant psychological theories of learning. This is followed by a more detailed account of the theoretical basis of this study which centres on research carried out by four research teams who collectively have developed both qualitative research and the phenomenographic approach in educational research. It is important to acknowledge here that the focus of this study is on the qualitative aspects of the studies conducted, although some detail relating to the learning

inventories that were developed from the findings of these studies, and their use in subsequent studies, is considered. The final section of the chapter provides a background to the development of conceptual models of teaching and learning in higher education as a basis for framing the findings of the current study.

Psychological theories of learning

Although there are many theories of learning, few have been developed explicitly for education. Those that have been applied to education have explained learning generally in terms of either the individual activities of the learner or the design of the learning context. Throughout the years, models of learning have changed radically, moving from functionalism and behaviourism, through cognitive theories, to competing forms of constructivism (Phillips, 2000). For example, if the learning environment is structured in the correct way, behaviourists argue, learning will occur (Skinner, 1969). From a cognitive or information processing perspective, sensory data is thought to come to the student from the outside, be stored for a short time, processed internally and then put in longer term storage for future use (Gardiner, 1987).

Alternatively from an individual constructivist perspective, knowledge is constructed internally, and tested through interaction with the outside world (von Glaserfield, 1995). Finally, from a Vygotskian social constructivist perspective, knowledge is thought to develop internally, in a process driven by social interaction with others such as teachers or peers (Wertsch, 1985). From this perspective, the context, and particularly the social context is of prime importance. It is interaction within a social context that brings about knowledge development within individual students. For each of the above perspectives

there is a separation between the individual and the world. Bredo (2000) makes the case that most psychological theories have tended to be rather one-sided, explanations based either on the environment or the individual without any attempt being made to integrate them.

> "Behaviourism ...meant a focus on the effects of the structure of the environment, such as its reinforcement contingencies. It was an attempt to describe 'learning' in purely environmental terms without having to know about the structure of the organism...Cognitivists took the opposite tack, emphasizing the effects of the structure of the organism. Thus, the structuring or organizing of behaviour was seen as due to the organism rather than the environment. In this conception, 'learning' is a change in the rules or procedures used to manipulate symbolic expressions. But what is omitted are the circumstances that lead to conceiving of the problem in a certain way in the first place" (p. 40).

Bredo (2000) also finds fault with the arguments from situated cognition, claiming the individual dimension is lacking and the social context over-emphasised. Criticisms of constructivism have concentrated on its almost exclusive focus on the construction of meaning, while omitting issues such as individual cognitive and motivational differences. Fox (2001) while accepting the value of the instructional methods associated with constructivism, points out these limitations and argues that the role of the teacher has also been largely ignored.

> "Learners do need to interact, to have dialogue, to solve problems and to make sense of new ideas; but they also find it difficult to see why they should make the effort, fail to pay attention, misconstrue new concepts, forget what they learned ten minutes ago and fail to apply fragile new knowledge effectively to new contexts. They can be helped by the expertise of teachers and they need instruction, demonstration and practice, as well as challenging problems and investigations, to make progress" (pp.33-34).

The development of qualitative research in student learning

Most of the early psychological research into learning in Higher Education relied on experimental design in which treatments were systematically compared with effects,

using well-tried measurement instruments to assess the influence on learning of established theoretical constructs.

In Britain, Parlett and Hamilton (1972) criticised existing educational research for following too slavishly a paradigm that had proved successful in the physical and biological sciences - the hypothetico-deductive method. The success of this paradigm with inanimate matter, or with plants and animals, was not considered an appropriate justification for applying it to human behaviour, which is essentially purposeful. They condemned what they described as the agricultural-botanical experimental paradigm in educational research for its implausible belief that students react to contrasting educational treatments as consistently as plants react to fertilisers.

Parlett and Hamilton (1972) continued their critique by contrasting the traditional research paradigm with the procedures used by social anthropologists, who observe and question people in different cultures in an attempt to interpret customs and beliefs through the experiences of their respondents. They used the term 'illuminative evaluation' for research designs that sought to evaluate educational innovations from the perspectives of the participants. In the 1970's such an approach attracted substantial criticism for lack of precision in measurement and subjectivity of data analysis. However, Parlett and Hamilton (1972) countered such criticisms by arguing that the objectivity of quantitative research was largely illusory. In commenting on descriptions of their own research design, they accepted that

> "some will argue – even with this degree of methodological circumspection – that what we did falls short of the highest standards of rigor in social sciences, being dependent – as it certainly is – on personal interpretation, much of which cannot be made public. Our answer is two-

> fold. First, one must recognise that many of the supposed ills of 'subjectivity' are not confined to research of the type described here: even the most rigorous statistical survey requires constant exercise of human judgement - e.g. in what questionnaire items to include; in what statistical comparisons will be made and how; and, most of all, in what light the findings are presented or summarised for others. This is not always acknowledged...(In the end), there is, of course, one powerful check on the study's validity - arguably the most powerful of all. Does the study present a 'recognisable reality' to those who read it?" (p.12).

Research into student learning

In the early 1970's the literature, in the United States of America and Sweden began to demonstrate a similar shift in thinking about to how research was being conducted in education. This was followed some years later by studies conducted in Australia and South Africa. The remainder of this chapter focuses on the more important of these studies.

Epistemological development

Students embark on university programmes with substantial variation in the ways they conceive of learning and how they have previously approached their learning, as their prior experiences are qualitatively different. As we saw in Chapter 2, this pattern is evident in nursing courses where students entering a nursing programme come from diverse backgrounds, both academically and in terms of their experience of practice.

Some of the earliest qualitative studies on students were conducted in the USA. The most influential of these studies was that of Perry (1970) who interviewed students in successive years of study at Harvard and Radcliffe Colleges and reported a recurring developmental pattern. Perry identified a developmental trend in students' thinking, which suggested that the students (mainly men in his sample) progressed through various

stages of thinking - from what he called 'dualism', through 'multiplicity' to 'relativism', and finally to 'commitment'.

Dualism implies a belief in the existence of right or wrong answers to every question and, in the early stages of their course, students often treat staff as the ultimate authority from whom they expect the 'right' answers, first to be learned and then to be reproduced in tests and examinations. Perry (1970) found students' experience of higher education was in conflict with this expectation; they were given inconclusive evidence, alternative theories, and competing value systems. This led them to challenge the explanations of the teachers.

However, students soon realised that they were actually being presented with a variety of views that had been given different weighting by their teachers and they found this disturbing. Having realised that there are, in fact, almost always more that one way of looking at a given situation, students initially concluded that any opinion (and particularly their own) is as good as any other. Only gradually did they begin to accept that conclusions rest on interpretations from objective evidence, with different interpretations justifiably being drawn from the same body of evidence in many instances. This brings in the idea of relativism.

The enormity of this uncertainty challenges fundamental beliefs and values and can be a traumatic shock for some students, and is sufficient to impede academic progress (which depends on using relativistic thinking). Only a few of students in Perry's (1970) study were able to take the final step and demonstrate personal commitment to their own interpretation or perspective. This final stage may be seen in the attempts, which some

students make to construct coherent, individual perspectives of the discipline, and identify with that view while retaining tolerance of alternative viewpoints. Perry (1970) showed that students developed through his hierarchy of positions at different rates and to different extents during their time in higher education, influenced in part by their educational experience.

In essence, Perry (1970) stressed how students move from the simplistic acceptance of facts presented by authority, through a period of confusion about the nature of knowledge and belief, to a recognition that we need to establish a personal philosophy of life. This is built out of one's own interpretation of relevant evidence, but is one that recognises, and is tolerant of, other people's alternative, even conflicting, interpretations of reality.

These conclusions have been largely supported in a subsequent study (Hofer and Pintrich, 1997), suggesting that intellectual development in higher education involves the gradual integration of previously separate ways of thinking, leading to an increased awareness of the complexities of academic knowledge. Subsequently, however, there has been research into possible gender differences, which does offer additional distinctions. Given that the current study is related to nursing, these findings do seem worth mentioning.

Belenky *et al.,* (1986) interviewed a sample of female students and identified two contrasting aspects of early relativistic reasoning. Separate knowing was equivalent to the type of critical thinking that Perry (1970) described in his sample, while connected knowing depended more upon empathy and personalised understanding. Although 'women's ways of knowing' are not seen by Belenky *et al.*, (1986) as gender-specific, they are nonetheless gender-related, with the personal style of connected knowing being

more common among women. However, as fully relativistic reasoning emerges, women begin to integrate both personal and impersonal thinking strategies into constructed knowledge.

A study directly comparing how men and women reflect on the nature of learning and knowing, describes four main epistemological levels that apply equally well to each gender (Baxter-Magolda, 1992). Her findings agree in the main with those of Perry (1970). However, she found a further stage of contextual commitment - in which certain aspects of knowledge are seen to be relevant in one situation and other aspects in different contexts. Such a view is relevant to nurse education where learning takes place in at least two contrasting settings – university and practice. Baxter Magolda (1992) identified absolute knowers (limited to dualist thinking), transitional knowers (indicating an initial acceptance of uncertainty), independent knowers (showing overconfidence in their own opinions), and contextual knowers (being ready to judge evidence in context and continuously to re-evaluate and reconstruct existing knowledge on the basis of new evidence).

At each of these levels, however, there were gender differences that indicated that women were more likely to rely on receiving knowledge rather than on mastery (if they were categorsied as absolute knowers), to be interpersonal rather than impersonal (if transitional knowers), and to be inter-individual rather than individual (if independent knowers). The highest level begins the process of integrating the ways of thinking shown separately in earlier stages. With this integration, earlier ways of thinking are

incorporated into the more advanced one, producing the idea of a nested and integrative hierarchy of categories, which has been found in several other developmental schemes.

Conceptions of learning

The distinction between formally defined concepts and conceptions, which carry personal meaning, is central to extensive work using phenomenography conducted by Marton and his colleagues in Gothenburg. This research approach explores the range of conceptualisations which participants report and simplifies them into a set of inter-related categories, often in the form of a hierarchy. However, Uljens (1992) explains that, when referring to phenomenography and learning, it is not accurate to identify early research conducted by the Gothenburg group within this category. He explains that "the period included elements of what was to become the phenomenographic programme, but was itself, of course, not an application of that programme. Naturally there are similarities between this research and what was to become phenomenography but it would be too much to say that it was phenomenographic" (Uljens, 1992 p.107). For this reason, we shall refer to this approach, for the purposes of this thesis, as 'contextualised phenomenography'.

In this period of research two influential concepts describing student learning– conceptions of learning and approaches to learning - were identified. In 1979, Säljö introduced the idea of contrasting conceptions of learning and considered the social influences on those conceptions. He conducted interviews with adults attending evening classes who had a wide range of prior educational experiences. After a series of questions relating to their actual experiences in classes, respondents were asked the more general

question "what do you mean by learning?" Transcripts of the responses were sorted into categories and reduced in number by considering coverage and relative meaning. The analysis eventually produced a hierarchy of categories ranging from the simplest to the most sophisticated views of learning. Learning was seen, variously, as a quantitative increase in knowledge; memorising; the acquisition, of facts, for subsequent utilisation; the abstraction of meaning; and an interpretative process aimed at understanding reality (Marton and Säljö, 1997). An additional conception, termed 'changing as a person', was identified by Marton *et al.*, (1993) when they replicated the study with Open University students in the United Kingdom. Other research has confirmed the main contrast in conceptions identified by Säljö and has highlighted its relevance (van Rossum and Taylor, 1987).

In the first three conceptions, there is a quantitative view of learning where the emphasis is on the straightforward attainment of discrete pieces of knowledge and on simply replicating or listing information. The other two conceptions imply the existence of a much more active learner, a learner who is engaging deeply with the text or a problem, incorporating new information with previous knowledge and achieving a satisfying personal sense of understanding.

In the simplest view, learning was seen to involve routine memorisation, sometimes by rote, and led to answers which involved reproducing only what had been presented. This rudimentary view of learning is somewhat similar to the epistemological level described by Perry (1970) as dualism, which again can be contrasted with the more sophisticated view of learning that involved both reasoning and understanding. Learning in this more

sophisticated conception is seen as depending upon transforming the incoming information and ideas by relating them to what is already known, and by examining their underlying meaning. From this latter perspective, learning thus involves a personal engagement with the task that can, over time, be experienced as being changed as a person.

While these conceptions of learning were not seen initially as a developmental sequence, they were seen as hierarchical with an important qualitative shift between the third and fourth ways of conceiving learning, with the first three having an external focus (with little or no focus on meaning for the learner), and the last two having a focus on meaning for the learner (Prosser and Trigwell, 1999).

The above studies lend support to the view that the primary focus of learners on the more global aspects of learning rather than on the content intended by an instructional or practice setting, and suggest that students and lecturers may not always share a common goal. For example, in the classroom an individual student may wish to use discussion to get a clearer sense of what the right answer is to a particular problem, while the lecturer may wish the group to move away from a dualistic view of this particular problem and of knowledge in general. The work of Säljö (1979) and Perry (1970) also suggests the possibility of considerable differences between students in their conceptions of the intellectual purposes of discussion and hence their goals in those circumstances.

Approaches to learning within naturalistic experiments

The starting point of what subsequently was developed into the phenomenographic approach was a sequence of studies that investigated one of the commonest academic

tasks – reading academic articles (Marton and Säljö, 1976; Svensson, 1977). As phenomenography was eventually chosen as the approach most appropriate to the present study, the methodology used in the original study by Marton and Säljö (1976) needs to be described in some detail. The theoretical basis of the approach will be discussed in the next chapter. Naturalistic experiments were conducted in which students were invited, individually, to read an article at their own pace, and in the way they did normally while studying, and to be prepared to answer questions on it afterwards. Marton and Säljö (1976) examined students' approaches to reading relatively long (1500 words) passages from actual academic articles. These passages were chosen to be intelligible without prior subject knowledge of the subject areas, and contained a tight logical argument based on the use of detailed supportive evidence.

When the students had finished reading they were invited to discuss what they had learned and how they had approached the task. During the interview, the students were first asked a general question of the form "Well now, perhaps you can tell me about what you've been reading?" Students were encouraged, through neutral questioning, to elaborate on what they had remembered. Then they were asked more specific questions about sections of the text, followed by another general question, with probes, to discover how they had interpreted the instruction to read the article, what their intention was in approaching the task (what they expected to get from the article), and how the experimental situation had affected them (e.g. whether they had felt anxious). Finally, questions were asked about their normal approach to academic reading.

The interviews were tape-recorded and transcribed. The interviews were initially read through as a whole and then responses to separate questions were examined carefully. The approach to analysis was similar to the development of grounded theory (Glaser and Strauss, 1967), without any advance theoretical framework imposed on the data. The responses were examined, looking for important consistencies within each transcript on its own. Then patterns of response recurring across the interviews were identified (Svensson, 1976). Finally, explanatory constructs were hypothesized to facilitate understanding of the students' descriptions and understandings, leading to the use of the terms approaches to learning and levels of outcome (differences in understanding).

This method of analysis puts a responsibility on the researcher to be guided by the data without imposing preconceived interpretations, but it is unlikely that, faced with a relatively unstructured set of free responses, different researchers would identify identical explanatory constructs. There is also great difficulty in communicating the findings of this type of research. In most analyses of interview transcripts, the main categories that best describe recurring types of answer are reported with quotes chosen to illustrate them (as in Perry's 1970 study).

What Marton and his colleagues did was to extend the process of qualitative analysis much further by examining students' comments more intensely to consider the implications of consistencies and variabilities within the individual transcript, as well as between transcripts. The categories within each explanatory construct that emerges are then delimited. The boundary of meaning surrounding each category is explored in terms of the differing emphasis or aspects mentioned by individual students. The quotations

included are thus very carefully selected to provide a definition of the various categories within each explanatory construct. The instances used to delimit the categories then form the basis on which independent judges assign transcripts to response categories (Marton, 1975). Following this analytic procedure, Marton and Säljö (1976) were able to describe important regularities both in the qualitatively different outcomes of learning (what students were able to recall about the articles) and in their approaches to learning.

The analysis looked, initially, at the levels of understanding that students had reached after reading the article, before considering how the task had been tackled – the process of learning. While there were many individual differences in the ways in which students read the articles, a surprisingly simple overall distinction was identified among the transcripts of the interviews

> "What we found was that the students who did not get 'the point' failed to do so simply because they were not looking for it. The main differences we found in the processes of learning concerned whether the students focused on the text itself or on what the text was about: the author's intention, the main points, the conclusions to be drawn" (Marton and Säljö, 1976, p.43).

The problem with categorizing the outcome of learning is that it necessarily depends on the particular article read. However, as long as the article is appropriately difficult and presents a clear argument supported by evidence, it is possible to use a general classificatory scheme for describing differences in the levels of understanding reached by students in these studies.

In many of the reports produced by the Gothenburg group at this time, there is a repeated emphasis on the importance of both content and context in affecting a student's approach to learning, although, as we will see later, this focus changed as phenomenography itself

was developed. Thus it is not possible to characterise a student as 'deep' or 'surface' it is only an approach to a particular academic task. The context in which learning takes place may be designed to afford a particular approach to study, but students do not necessarily perceive their situation in the way it was designed. In a particular class of students, while the context, as it was designed, may be the same for all the students, the students' perceptions of that situation may vary. This variation results from the interaction between the students' prior experiences of similar learning and teaching situations and the particular context within which they are placed. These perceptions, in turn, are related to the way the students approach their learning in that context. Therefore, given the same context, different students form different perceptions of their situation within the context, and approach their learning tasks in different ways. Different prior experiences evoke a focus on different aspects of the situation. In lectures, for example, some nursing students may focus on those aspects that afford a more surface approach to study, while others may focus on those offering a deeper one.

The effect of content and context is clearly demonstrated in another study from the Gothenburg group. Using an experimental approach Fransson (1977) set out to induce different approaches to learning by varying the context so as to produce anxiety or a relaxed condition as students read an article. He also compared a group whom he expected to have immediate interest in the content with one where the potential interest was less apparent. It was clear from the findings that both interest and anxiety did affect the students' approaches to learning, but not in a simple way. It was not so much that the anxiety-provoking situations induced a surface approach to learning, but that the students who felt the situation to be threatening, whether that was intended or not, were more

likely to adopt a surface approach. Lack of interest or perceived relevance also tended to evoke this rote-learning approach. Where a student feels threatened, or is under pressure to respond to examination demands, or encounters syllabuses that have little personal relevance then it is more likely that a surface approach will be adopted. The Fransson (1977) study showed explicitly how students' perceptions of learning and teaching environments might vary systematically.

Research into the consistency of students' approaches has produced contradictory results. Marton and his colleagues maintained that consistency of approach could not be expected, as an approach to learning was a reaction to a specific learning context and to the content of a particular article. However that conclusion related to naturalistic experiments. As we will see in the next section, interviews about everyday studying, where there are multiple tasks, time pressures, and assessment demands show that students develop routinised study strategies (Ramsden, 1981).

Research into studying within the teaching-learning environment

Research conducted by a research group in Lancaster marked the beginning of the shift from naturalistic experiments to everyday studying and perceptions of actual teaching and learning environments provided by staff (Entwistle and Ramsden, 1983). The Lancaster research built on the Gothenburg work to develop concepts of approaches in everyday studying and course perceptions. The main purpose of the six-year study, which began in 1976, was to examine the objectives of lecturers in Higher Education in relation to students' academic performance. This was a major piece of work involving 66 departments from British universities and polytechnics. The research on students was

divided into two parts. One was a longitudinal survey designed to identify student's attributes which might predict their subsequent degree performances. The other was an interview study intended to explore students' reasons for entering higher education and their experience of it.

The interview study conducted by Ramsden (1981) focused on students' approaches to learning in their everyday studying. It therefore asked students how they responded to lectures and tutorials, as well as how they tackled essays and examinations. While he was able to confirm the importance of the distinction between deep and surface learning, he also found that students varied their approaches depending on the task and on their experiences within the specific course. He thus began to explore the influences of the teaching-learning environment on approaches to learning.

The method of questioning, and the analysis, followed closely the methods used by the Gothenburg group. Because it was more closely focused on the actual context experienced by the students, the methodology was more immediately applicable to the current study. It is also perhaps the closest example of what can be described as contextual phenomenography.

In the quantitative part of the study this study Entwistle and Ramsden (1983) developed the Course Perceptions Questionnaire (CPQ) from the interviews with students. It was composed of eight scales including workload, commitment to teaching, clear goals and standards and freedom in learning. Using this questionnaire and their Approaches to Studying Inventory (ASI) they were able to identify relationships between the way students perceived their courses and the approaches to study they adopted in them.

This study also demonstrated that the deep and surface categories could be used to explain comparable differences in aspects of everyday studying, including reading articles, writing essays, and preparing for examinations (Entwistle and Ramsden, 1983). However, an additional category was required to portray the variations in studying, as opposed to learning, and this was described as a strategic approach. By adding this category it was it possible to explain how students adjusted their ways of studying to take account of formal assessment.

This study showed that each approach to learning and studying was associated with characteristic forms of motivation – deep with intrinsic motivation and interest in the subject matter, surface with extrinsic motivation and fear of failure, and *strategic* with achievement motivation. Looking at students' perceptions of the teaching-learning environment, it was also found that a deep approach appeared to be influenced by 'good teaching' and 'freedom in learning', while heavy workloads and fact-based assessment procedures induced a surface approach (Entwistle and Ramsden, 1983).

In other studies, Marton's (1975) original work on approaches to reading text has been broadened even further to show equivalent approaches to learning, in problem solving (Laurillard, 1984), essay writing (Hounsell, 1984), attending lectures (Hodgson, 1984), diagnosing medical cases (Whelan, 1988), and writing computer programmes (Booth, 1992). Within the research literature similar descriptions of different ways of learning can be found, with contrasts between generative and reproductive approaches (Wittock, 1974), comprehension and operation styles (Pask, 1976), transformational and

reproductive approaches (Biggs, 1982), holistic and atomistic approaches (Svensson, 1977), and elaboration and fact retention (Schmeck, 1983). There is evidence that, when any of these approaches is used exclusively, qualitatively different types of learning will take place (Marton and Säljö, 1976; Pask, 1976; Svensson, 1977; Biggs, 1979).

Other studies (Frannson, 1977; Newble and Jaeger, 1984; Thomas and Bain, 1984; Ramsden, 1984; Laurillard, 1987) have found that students adopt an approach according to the demands of the learning situation, for example, a student would use a variety of strategies when preparing for different types of course assessment, adopting, for example, a reproductive approach when preparing for an objective, fact-based test and a more transformational approach when preparing for essay type assessments.

Consistency and variability in approaches to learning

From the perspective of the above studies, an approach to learning is defined in terms of the relationship between the students and both the variety of tasks in which they are engaging and the situations they experience. An approach is thus a more complex construct, one incorporating both consistency and variability. The idea of consistent behavioural traits presumes too little influence for the events and circumstances that cause change, while the relational view does not explain the existence of study habits.

The original work on approaches to learning by Marton and Säljö (1976) had emphasised the contextual and situational specificity of approaches to learning. Approaches to learning within the naturalistic experiments they conducted on reading academic articles showed that the approach was influenced, to some extent, by the content of the article and

the perception of context (whether the context was seen as supportive or anxiety provoking – Fransson 1977). But the effects demonstrated were bound by the restrictions of the experimental design. When students were asked, instead, about their everyday studying, it became clear that they had fairly consistent study habits that included their approach to learning. In the interviews carried out in the Lancaster study (Entwistle and Ramsden, 1983), students were found to vary their approach across different types of study task (lecture notes, essays, exam revision, etc.), and across lectures and courses. But still some students could be seen as adopting predominantly a deep or surface approach with differing degrees of consistency. This element of stability made it possible to ask students, within inventories, about their typical approaches to learning and studying. And the findings from the use of inventories have shown that the mean scores on approaches to learning adopted by a whole class of students are influenced by the approaches to teaching described in inventories by their lecturers (Trigwell *et al.*, 1999).

Assessment also has a general effect on approaches to learning. In one study by Thomas and Bain (1984) the method of assessment was changed from multiple-choice questions (MCQ) to essay format as a result of which the class mean moved towards deep approaches. With a return to MCQs, the mean shifted away back again. Thomas and Bain (1984) did, however, also show that students who had the highest scores on deep approaches with essay-type exams were still higher than other students when taking MCQs, and vice versa. So, there are clearly relatively stable tendencies for students to adopt one or other approach, no matter what their experience of teaching and learning. Students adopting deep approaches are also more likely to prefer teaching that is designed to encourage a deep approach, while students tending to use a surface approach

prefer teaching and assessment that allows them to use that approach. It seems that teaching and assessment do affect the approach to learning, but not in a straightforward way.

Different research studies have argued for and against stability in approaches to learning. This has been partly dependent on the theoretical position taken, and partly on the related decision about the method of data collection. Psychologists have tended to look for stability and use methods like inventories that depend on, and demonstrate, the existence of relatively consistent ways of learning and studying. In contrast, sociologists have been more concerned to demonstrate variability and to use interviews in which the effects of context and individual circumstances inevitably become more obvious. In trying to see an overview, it is important to recognise how the theories espoused, and the methods used, affect the extent to which approaches to learning are seen as consistent or changeable. From an educational standpoint, it is important to realise that the overall approaches of a class can be changed by teaching and assessment, but it is also necessary to dispel the belief that the context is the only important influence. The nature of what is being learned and the prior experience, knowledge and ability profile of the individual student is just as important in influencing how students learn and what they achieve.

The orchestration of studying within the environment

Many of the subsequent quantitative studies of student learning were guided by the Lancaster study (Entwistle and Ramsden, 1983). The study established strong empirical support for the concepts described and provided both the instrumental means for

measuring study approach variables and the methodology (exploratory factor analysis) for follow-up studies to be undertaken (Meyer and Dunne, 1991).

Meyer and Parsons (1989) used the two research inventories (ASI and CPQ) to explore the association between context and approaches to learning in South Africa. They reported that the two study orientations of this ASI, meaning orientation and reproducing orientation, could be found in a totally different educational system, but that the CPQ was less satisfactory. CPQ had failed to demonstrate its usefulness in exploring its relationship between context and approaches at an individual level. However, Entwistle and Ramsden (1983) had already stressed that the CPQ was applied at a departmental level rather than an individual level and they responded to this issue again in 1989 (Entwistle, 1989; Ramsden, 1989). As Richardson (1987) suggests, the perceptions of a group of students about an academic context can provide a useful indicator of that academic context, even though there will be considerable variability in the responses of individual students.

The above examples capture some of the essence of research on student learning for it suggests that the outcome of learning can be influenced by operating on the context of learning. The manifestation of qualitative differences in the manner in which students engage in learning tasks is fundamental to an understanding of research on student learning. The terms 'deep' and 'surface' introduced by Marton and Säljö (1976) established the foundation for two powerful categories that have subsequently formed the conceptual and terminological basis of a number of models of student learning. Entwistle and Ramsden (1983) considerably extended the implications of the association between

context and approach for educational practice. They concluded, on the basis of a much wider conceptualisation of learning context, that qualitatively different study approaches were associated with certain perceived forms of departmental learning contexts. Much of the impetus of subsequent quantitative studies of students' learning was inspired by this large-scale study. This widely cited study (Entwistle and Ramsden, 1983) established strong empirical support for their conceptually proposed orientations by providing both the instrumental means for measuring study approaches variables (in the form of the Approaches to Studying Inventory - ASI) and the methodology (exploratory factor analysis) for follow up studies to be undertaken (Meyer and Dunne, 1991).

Meyer and Dunne (1991) point out that, in many of the follow–up studies involving ASI or its derivatives, the important distinction between the conceptual and the empirical compositions of the (qualitatively different) study orientations were either lost or ignored completely. They claim a number of studies "implicitly assumed that the empirical composition of the orientations, reported by Entwistle and Ramsden (1983), in the form of second order factor structures were stable features of the model of student learning and could thus be used to solicit the manifestation of qualitative differences between, or within, population samples" (p.499). They go on to explain that nearly every follow up factor analytic study involving the ASI lost sight of the fact that conceptually, approaches to studying can not be decontextualised (Marton and Säljö, 1976; Entwistle and Ramsden, 1983) as they are evoked by a specific context. As Meyer and Dunne (1991) then comment "conceptually any variation in study approaches must be attributable, at least in part, to variation in perceptions of the context of learning, rather than to a population dependent variation" (p.499).

Building on this work Meyer (1991) introduced the concept of study orchestration to show links between approaches and perception which he saw as the match between the students' approaches to studying and their perceptions of these aspects in the learning environment. He demonstrated that perceptions of teaching as supporting deep or surface approaches mapped onto the same area within three-dimensional axes as the equivalent approaches to studying (Meyer and Muller, 1990). The composite of approaches to learning and perceptions of the teaching-learning environment represented the orchestration shown by the students. Subsequent work indicated that students with coherent study orchestrations were much more successful than those whose orchestrations were dissonant. A mismatch between approaches and perceptions seems seriously to disrupt academic progress (Entwistle and Tait, 1990; Meyer, 1991).

Studies that seek to clarify, confirm or extend understanding of the complex relationships which exist between perceptions of the learning context, study approaches, and the quality of the learning outcome are clearly of significant value to educational researchers and practitioners. The influence of the context on study approaches is considered to be a fundamental phenomenon and so far much evidence in support of its existence has been cited in the research literature on student learning. So far it has been demonstrated that students' prior experiences of learning and teaching relate to their present experiences and how their present experiences relate to the quality of learning achieved. It has also been shown how different students could experience the same teaching and learning context in contrasting ways. Similar studies (using both interviews and specific questionnaires developed from this approach) have now been conducted with teachers in

relation to how they perceive their teaching situation, how they approach their teaching in that situation and the outcomes of the teaching in terms of the quality of student learning resulting from their teaching.

Approaches to learning in nursing and medical education

There is, however, less research evidence to show the contextual influences on student learning within academic departments providing nurse education. Such research, although limited, is only apparent in the literature from the 1990's. Approaches to learning have been investigated by Trigwell and Prosser (1991) and Lapeyre (1992). Trigwell and Prosser (1991) employed the Approaches to Studying Inventory and Course Experience Questionnaire to investigate the effects of academic context on approaches to learning with a class of third year nursing students (N=55). The findings of the study suggested that surface approaches to learning were associated with perceived heavy workload and assessment in which rote learning was emphasised. However, Trigwell and Prosser (1991) used a single class of third year nursing students from only one institution and did not compare the approaches to learning of third year nursing students with the nursing students from different years of study, thus restricting the generalizability of their findings.

Lapeyre (1992) employed the Approaches to Studying Inventory to investigate the differences in approaches to learning between first year nursing students from one College of Nursing and Midwifery (N=32) and first year nursing students from a Higher Education Institution (N=23). It was reported that there were no significant differences in approaches to learning between the nursing students in these samples (Lapeyre, 1992).

However, the research only used first year students and the samples were small. The limited length of experience acquired by first year students in nurse education and the small samples make it impossible to generalise from these findings.

One example of a study that looked at contrasting contexts was that conducted by Newble and Clarke (1987). Their study took place in two medical schools, one described as traditional and the other using problem-based learning. The researchers used the ASI to compare differences in medical students' approaches to learning in two different academic contexts (N=391). The findings indicated that the innovative medical school was perceived to be higher on meaning orientation than was the traditional. These findings imply that although students with similar qualifications are studying the same discipline, their approaches to learning may vary according to their experiences of the different academic contexts.

Staff conceptions of teaching and learning

One of the earliest studies of university teachers' conceptions of teaching from the student learning perspective was conducted by Dall'Alba (1991). She interviewed 20 teachers from a variety of specialisms including English, Medicine, Economics and Physics. From the analysis she suggested seven different ways in which teachers understood their teaching from their individual teaching and learning situations: teaching as presenting information, transmitting information (from teacher to student), illustrating the application of theory to practice, developing concepts or principles and their relations, developing the capacity to be expert, exploring ways of understanding from different perspectives, and, finally, bringing about conceptual change.

In discussing these conceptions, Dall'Alba (1991) suggested the idea that there are conceptions of teaching which are more or less complete, in that the later conceptions go beyond and /or include aspects of the former conceptions but not vice versa. She claims that

> "The categories described are ordered from less or more complete understandings of teaching. At the lowest level, teaching is seen in terms of the teacher alone and, more particularly, in terms of what the teacher does. From there, the focus shifts to incorporate the content and, at higher levels, students' understanding of the content becomes prominent. Finally the most complete conception focussed on the relationship between teacher, students and context" (p. 296).

Ramsden (1992) describes theories of teaching in terms of three progressively more sophisticated conceptions - teaching as telling, as organised study activity, and as making learning possible. These distinctions were developed further by Prosser *et al.*, (1994). Their conceptions of teaching again have three main divisions - transmitting information, helping students to acquire the concepts of the discipline, and helping students to develop and change their own conceptions. But underlying these conceptions of teaching are two contrasts. Firstly, there is a distinction between viewing teaching from the perspective of staff and institution, or from that of the student. And then there is a related contrast between seeing teaching as transmitting information, or as encouraging learning.

Several other studies have suggested similar ways of describing conceptions of teaching (e.g. Samuelowicz and Bain, 1992), which are summarised through the set of categories presented in Table 1. These categories show a strong parallel with the conceptions of learning. The emphasis on information transfer implies a reproductive conception of learning, while a concern for awakening interest indicates a transformational conception.

Trigwell and Prosser (1996) see conceptions of teaching as forming a nested hierarchy, in which the encouragement of transformational learning subsumes the emphasis on transfer.

The research on student learning showed how students' conceptions of learning led to equivalent approaches to learning and studying. It is reasonable, therefore, to anticipate that lecturers will also show coherence between their conceptions of learning, their conceptions of teaching, and their approaches to teaching, although this has yet to be established empirically. There is evidence from some studies (Trigwell *et al.*, 1994; Trigwell and Prosser, 1996a) that teachers who have a student-centered view of teaching are constrained by external pressures to adopt teaching approaches which rely more on information transfer.

Table 1 Contrasting Conceptions of Teaching
(Prosser and Trigwell, 1999)

Teacher focus *Information transfer*	• Conveying information and covering the syllabus • Making sure that necessary skills and knowledge are acquired • Maximising the general level of performance of the class
Conceptual understanding	• Developing conceptual understanding and employment-related transferable skills.
Student focus *Conceptual change*	• Awakening and maintaining students' interest in the subject • Encouraging students to think independently and imaginatively • Helping students to develop personal and social skills, and a broader perspective on their future life and vocation

There is some evidence (Trigwell *et al.*, 1999) that an approach to teaching intended to create conceptual change is related to a deep approach to learning in students, while

students who habitually adopt a deep approach prefer teaching which is challenging and encourages independent thinking (Entwistle and Tait, 1990). There are close connections, too, between students' approaches to studying and the way they perceive their teaching and learning environments as a whole (Meyer, 1991). The aspects of teaching likely to encourage a deep approach are addressed next.

Research into the teaching-learning environment

Janssen (1992) underlined the importance of lecturers also providing students with a focussed approach towards the assessment requirements of a course. Although the use of lectures has been criticised in the research literature (see, for example, Gardiner, 1994), it is still the most common form of teaching in Higher Education. The earlier literature on the implementation of Project 2000 highlighted, in a number of evaluations, the regular use of lectures in the CFP section of the programme and the corresponding negative feedback from the students in terms of learning in such environments (White *et al.*, 1994; May *et al.*, 1997).

In spite of criticisms, it can still be argued that a good lecture is the most appropriate way of introducing a topic and providing a conceptual map of the subject. It can also be used to increase student motivation and to convey a distinctive way of thinking about a discipline (Brown and Atkins, 1988). However, a review of the literature indicated that many lecturers were ineffective, presenting too much detail and too little illustrative material, and offering few opportunities for active involvement by the students (Gardiner, 1994). Direct observation of lectures has also produced generally unflattering description of lecturing (Brown and Bahktar, 1983).

When students were asked about their experiences of lectures, either in interviews (Hodgson, 1997; Ramsden, 1992; 1997) or through evaluation questionnaires (Marsh, 1987), a clearer picture emerges as to what constitutes 'good lecturers' from the students' perspective. They are described in terms of seven main categories- level, pace, structure, clarity, explanation, enthusiasm and empathy. And, of these, interviews with students suggested that it is the final three (explanation, enthusiasm and empathy) that are the most likely to support a deep approach to learning (Entwistle, 1997).

Explanations affect the extent to which students are encouraged to make sense of a topic in their own way. Explanations can also be used to model distinctive forms of argument and the use of evidence adopted in the discipline. Brown and Atkins (1988) emphasise the value of evoking intellectual curiosity through the use of problems or paradoxes, and demonstrate how good explanations depend on being appropriate (both to the topic and the students' existing knowledge) and on the extensive use of examples, analogies, metaphors and personal anecdotes. Combining a supportive framework within the lecture with many links to relate ideas is likely to encourage deep learning.

The enthusiasm shown by the lecturer communicates itself to students and arouses interest. Some lecturers may even create a conversion experience through the vicarious experience of relevance (Hodgson, 1997), which shifts the students from a surface to a deep approach. Finally, students comment on the lecturer's perceived concern with them as learners – concern about potential difficulties in the subject matter and about the progress they are making. In the literature, such concern is described as empathy. It is also shown by the readiness to answer questions and to provide opportunities for

discussion (Brown and Atkins, 1988). However, there may be a more fundamental aspect to empathy. Teaching depends on being able to put oneself in the position of the learners – to recognise what is needed to help bridge the gulf between initial incomprehension and the subsequent dawning of understanding (Entwistle and Smith, 2002).

Studies often identify three main forms of knowledge related to teaching – about subject matter, teaching and managing learning, and relationships with the learner (Wittock, 1986). Shulman (1987) argued that a combination of content knowledge and pedagogical knowledge – pedagogical subject knowledge – plays a crucial role. Marton and Booth (1997) have commented on the importance of the interaction between teachers and students, which takes the idea of good teaching even further. For them it also requires a mutual awareness of the teaching-learning process. They claim pedagogy depends on:

> "..meetings of awareness, which we see as achieved through the experiences that teachers and learners undertake jointly. Teachers mould experience for their students with the aim of bringing about learning and the essential feature is that the teacher takes the part of the learner. The teacher focuses on the learner's experience of the object of learning. Here we have (what we call) 'thought contact', (with) the teacher moulding the object of study (for the students)" (p. 179, original emphasis).

This idea of moulding an object of study implies that individual teachers may interpret and teach the same topic in importantly different ways. At one level this may seem to be a truism, but when explored more fully it illuminates some of the difficulties students have in seeing the teacher's meaning.

Recent work has been examining in detail how different teachers construct an object of study for their students within a specific subject area. Patrick (1998), for example, distinguished three groups of history teachers in secondary schools who were teaching in

quite different ways. One group appeared to have a transmission model, emphasising the content, mode of delivery, and teaching techniques. The subject matter, and how their students saw it, were both unproblematic for these teachers. Another group of teachers saw historical knowledge as an entity which, while requiring interpretation, could still be offered to students as material to be learned, first, by the acquisition of knowledge and, then, by discussion and interpreting that knowledge. But the understanding expected as a result of this process was still that of the teacher, and the students were expected to reach an equivalent form of understanding. The final group of teachers tried to share their ways of thinking about the subject and emphsised the contested nature of historical knowledge, suggesting a sophisticated conception of both the subject area and the ways of teaching it.

A sophisticated conception of teaching comes from the teacher's own understanding of the subject, but may also depend upon the ability to envisage the subject from the students' perspective and then develop ways of helping the students to reach a satisfactory level of understanding (pedagogical subject knowledge). But teaching strategies are not just influenced by knowledge, they also depend on personal experience. Marton and Booth (1997) argue that meetings of awareness are achieved through the experiences that teachers and learners undertake jointly.

The knowledge, attitudes and beliefs of schoolteachers were explored in a major review by Calderhead (1996). The analysis indicated that the way in which teachers interact with their students depend on their own knowledge and beliefs about teaching and learning. In general, content knowledge is more fully developed in university teachers and tends to

involve a more thorough conceptualisation of individual topics and the discipline as a whole.

As the previous chapter highlighted, however, nurse teachers are generally neither experienced nor confident in their role in higher education, and are particularly unprepared to teach about research. As we have seen, nursing students learn in two environments - the university setting and the practice areas. Much of the applied learning takes place in the practice areas where mentors act as teachers, so students will also be influenced by the teaching approach adopted by the mentor and their level of knowledge and experience.

Shulman (1987) described a series of knowledge bases that underpin effective teaching, but argued that a combination of content knowledge and pedagogical knowledge played a crucial role in teacher thinking. His description of content knowledge is better described as a feeling for the discipline that may amount to a passionate commitment to a specialism or a theoretical position. However, knowledge and skill in teaching and managing learning is not just a matter of knowing, it also depends on preferences which stem from the individual teaching style adopted (Entwistle, 1988). Those preferences, which have links with personality, affect the choices made and may lead to strong convictions about what is considered appropriate. Shulman (1987) also emphasises the importance of understanding how students learn and develop intellectually. Such knowledge is essential if academic staff are to design curricula, and teach in ways which are tailored to the perceived needs of a particular group of students.

Using systems thinking to develop conceptual models of teaching and learning environments.

The final part of this chapter relates to the development of conceptual models of teaching and learning environments that have been developed to integrate otherwise separate research findings. Although a variety of such models can be found, the one most relevant to the topic of this thesis was developed by Entwistle (1987). This section traces how this model was developed initially and describes two other models that emerged subsequently.

By the mid-1980s research on student learning had accumulated a variety of concepts that could be used to describe important aspects of student learning. Some of these came from educational psychology, describing what were seen as relatively stable characteristics, such as intellectual abilities, learning style, personality and motivation. The crucial importance of previous knowledge on current learning has been repeatedly emphasised, while the early work on student learning has added work habits and study skills, although these, along with motivation, were seen as more dependent on the teaching experienced.

These analytic constructs were, however, rather remote from the experience of students and lecturers, and the research of Marton and others, as we have seen, introduced concepts that described approaches to learning and studying. This work also indicated that the ways that teaching affected individual students depended on how they perceived that teaching, which in turn depended on their own characteristics (knowledge, ability, etc.). But no attempt had been made at that time to bring these various influences together in the form of a model of the whole teaching-learning environment.

Subsequently, Entwistle (1987) drew on an approach developed in organisation theory called soft systems analysis (Checkland, 1981) that focussed attention on the importance of describing an organisation as an interacting system. This conceptualisation of organisations indicated that change of any individual element of the system is unlikely to have any direct influence on the overall outcome. Effective change will depend on analysing the system, identifying problems and weaknesses, and then negotiating the types of change that are most likely to create the required improvements in outcome. It was seen that this technique could usefully be modified to provide systematic analyses of teaching and learning. A first step would involve mapping out from research findings all the components within the system that influence effective learning in higher education. It would then become clearer how changes introduced into teaching were likely to affect the quality of learning.

Action research reported by Eisenberg (1988) also influenced thinking at this stage. He argued that the changes his department had instituted as a result of a careful analysis of influences on learning derived from earlier research studies had proved effective only because these changes were treated as an interacting whole, designed to encourage a deep approach.

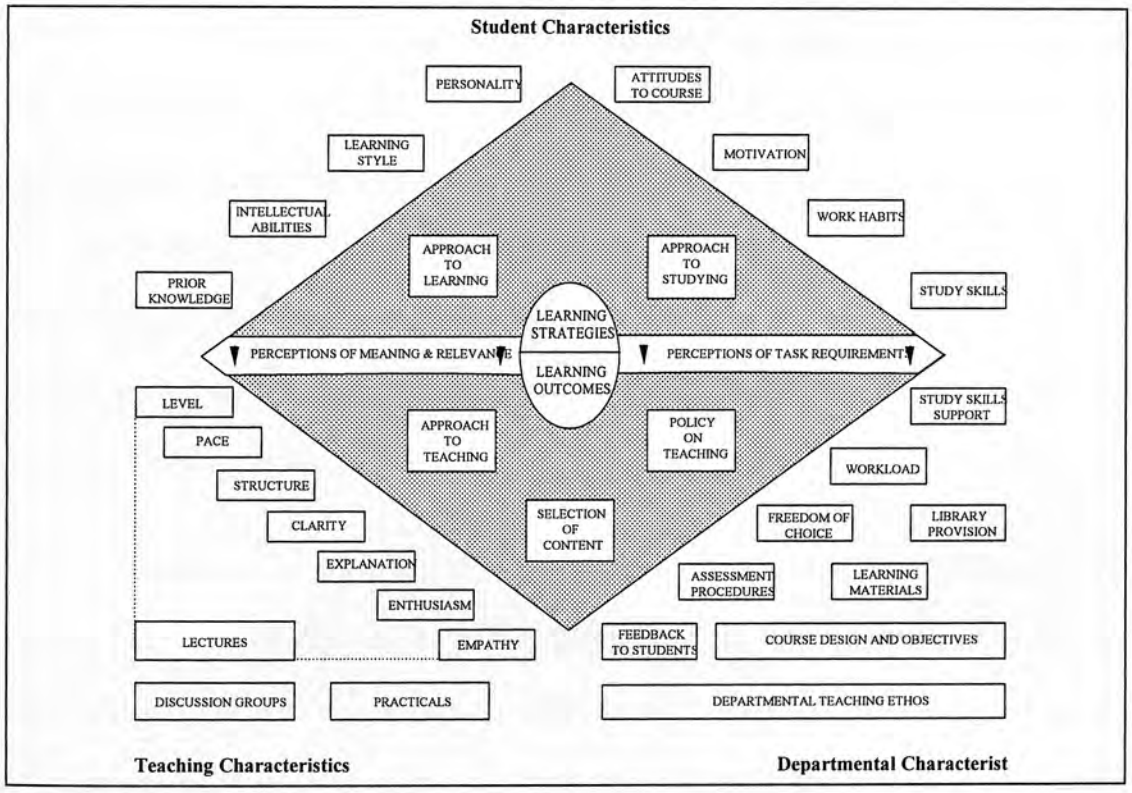
> "Gradually, I have come to realise that the 'action research' I have tried to carry out is closely related to my everyday teaching. It involves 'listening' to one's students as well as talking to them. Inappropriate approaches to learning are simply induced by teaching, (even by) just one piece of the 'jigsaw' that is out of place. Encouraging students to adopt deep approaches and to employ them holistically is difficult because all the pieces need to fit together" (Edited, pp.196-7).

These ideas stimulated a review of existing research evidence to see what an interacting system describing university teaching and learning might look like. The resulting

conceptual model was intended to guide the planning of innovations in higher education towards the support of a deep approach to learning (Entwistle, 1987). This model is shown in Figure 1 in the slightly modified form published later (Entwistle, 1998 p. 105).

Figure 1 depicts a model of a teaching-learning system which depends on an interaction between the characteristics of the students (including their previous educational experience), the methods and approaches of teaching adopted, and the policy and procedures of the institution.

Figure 1 A Conceptual Model of the Teaching-Learning Process
(Entwistle, 1998)



Each of these main areas can be divided into component parts, as shown below. As this conceptual map is derived from research into ways of encouraging a deep approach to learning, approaches and strategies are shown in the central diamond together with the

learning outcomes expected from it. The top half of the diagram shows some of the main characteristics of the students which will affect the quality of their learning.

Between the top and bottom halves, perceptions are shown which indicate that the learning environment affects students only indirectly. Although the learning environment has some effect on all students, as already shown those effects are not identical, depending as they do on the individual student's aims, abilities, and approaches. It is a student's perception of the learning environment, rather than the environment itself, which affects how and what that student learns.

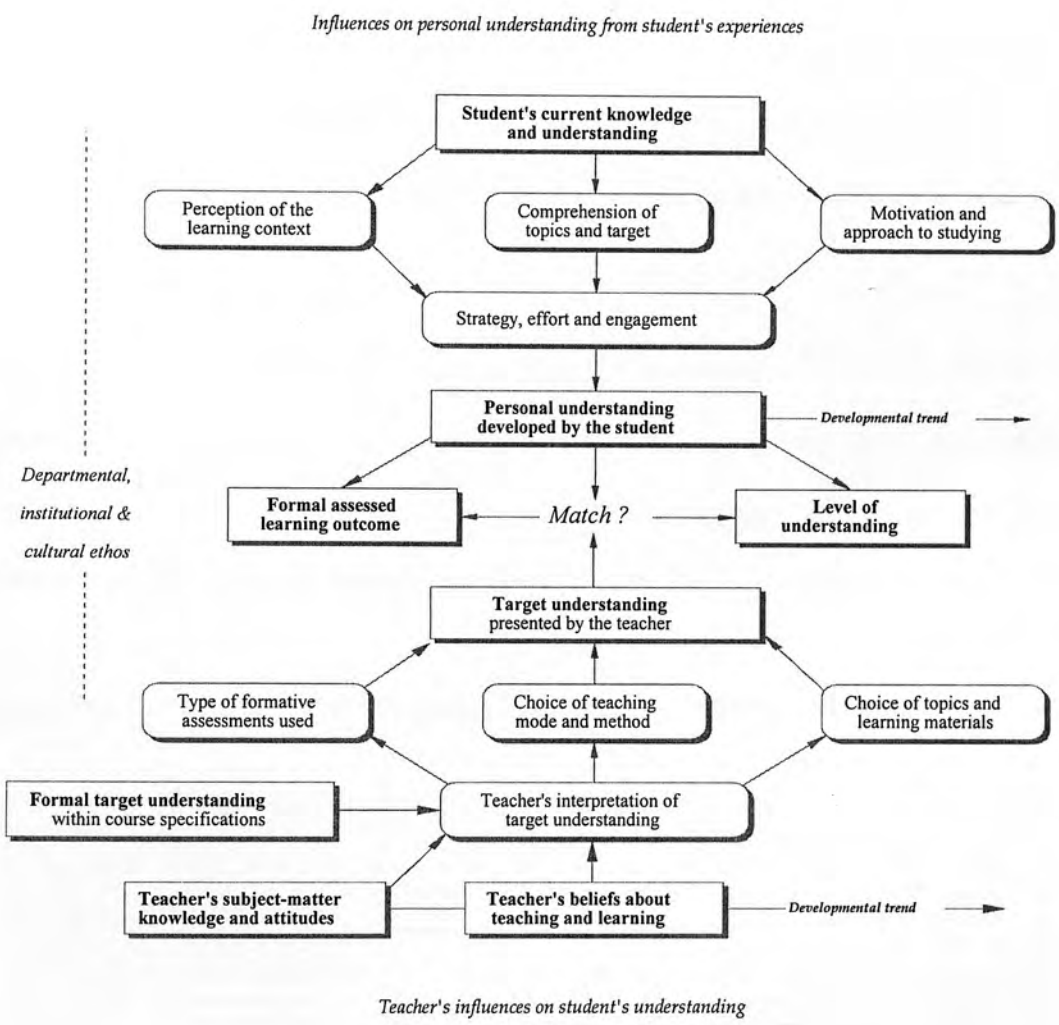
What any individual lecturer can achieve is constrained by departmental and institutional policies, and also, to a varying extent, by the content requirements imposed by professional bodies or disciplinary conventions. These two broad restraining frameworks lie outside the focus of Figure 1 but have been included in some other versions of it. In the diagram shown here, the lower half is divided into two, indicating responsibility which lies, on the left, more with the individual lecturer and, on the right, more with the department or institution.

The individual boxes represent components that have been shown to influence the effectiveness of teaching and the quality of learning outcomes. As far as possible, the positioning of the boxes is intended to imply relationships both with adjacent boxes and with those vertically above within the top half of the map. Thus, the level of teaching depends on prior knowledge, and the pace should relate to the ability of students in the class. Similarly, assessment procedures and the freedom of choice allowed are known to have a major effect on the approach to studying, motivation and attitudes of students.

One inadequacy in the model is its depiction of an essentially traditional context of teaching and learning. The model could, however, be easily modified to incorporate more innovative procedures, and be extended to draw more attention to the responsibilities of the institution to support quality in teaching and learning through its policies (Elton and Partington, 1991). Another weakness is that it reflects a view of ability and other student characteristics as relatively stable, while current thinking would emphasise the possibilities of change through appropriate teaching.

There have been two recent developments of this model. The first was a general model of the influences on student learning (Entwistle and Smith, 2002) that focused more directly on the content of what is being taught (Figure 2). It maps the influences on student learning that come from the student and from the teacher in relation to a distinction between target understanding and personal understanding. The formal target is set either institutionally or by an external examining body and indicates the syllabus that has to be covered. The individual teacher has to interpret what is implied by the intended learning outcomes or learning objectives outlined in the agreed syllabus, and the interpretation depends on the teacher's own beliefs, attitudes and knowledge about teaching and learning. The teacher then has to choose and order the topics to be taught, as well as deciding on the most appropriate methods of teaching and assessment to adopt. By this stage the actual target understanding expected, particularly in higher education, may have been obscured from the students' perspective.

Figure 2 A Conceptual Model of Influences on Students' Levels of Understanding (Entwistle and Smith, 2002).



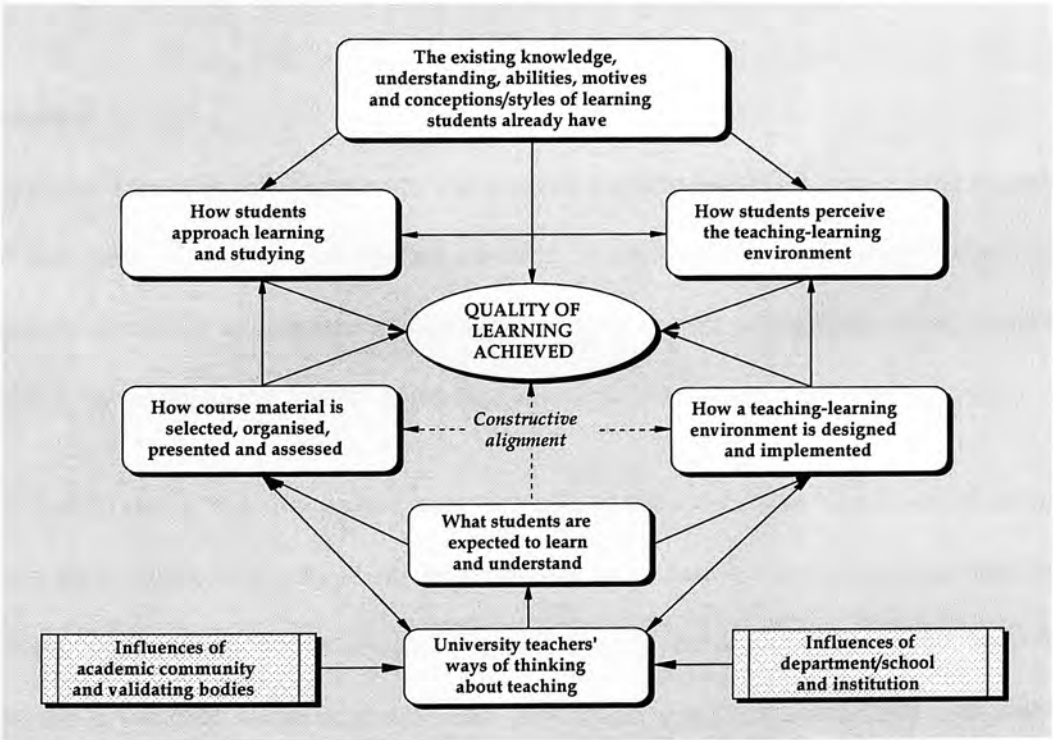
The top half of Figure 2 describes how a student's personal understanding is affected by the prior knowledge and personal characteristics that combine to affect the strategies, effort and engagement in the task shown by the individual student. These influences result in the personal understanding that students feel they have reached, but that is then judged against the teacher's, or the examiners, interpretation of the target. This may not,

however, coincide with the level of understanding the student has actually reached, as the assessment procedure may not adequately tap that understanding. The model also recognises that the classroom activities of both students and teachers are affected by departmental, institutional and cultural factors, and that the static model represents a particular point in time, whereas both teacher and student are developing their ideas over time.

The second more recent model shown in Figure 3 represents a simplified version of Figure 2, but with the teaching content and teachers' conceptions given rather more prominence. It has been developed for use in an on-going project that involves collaboration with university teachers in various subject areas (Entwistle *et al.*, 2003).

Figure 3 A Conceptual Model Indicting Influences on Student Learning

(Entwistle *et al.*, 2003)



In this model, the students' characteristics describe what a student brings to a particular learning situation, without any implication about their relative stability. These characteristics are known to influence both students' approaches to learning and studying and their perceptions of the teaching-learning environment. In this current model the left-hand side again describes aspects that are more under the control of the course team or individual lecturer. The other side indicates the effects of all the other aspects of the teaching-learning environment that are determined at departmental or institutional level, such as assessment regulations.

The model suggests that how courses are planned, organised and taught depends on university teachers' ways of thinking about teaching, which in turn are influenced both by the tradition within the academic community and the requirements of validating bodies. These conceptions of teaching are also affected locally in discussions about teaching within the department, and by the policies developed by the institution

Summary

It has been shown in this chapter that there exists a strong empirical base for the research that has been carried out on student learning. Additionally, the development of new research in relation to teachers and how their approach and perceptions of the teaching context can influence the quality of the learning outcomes for students was explored.

The need to take a wide integrative view of teaching and learning in higher education and to appreciate the complexity of the determinants of student actions and perceptions has perhaps not, as yet, been sufficiently appreciated in nurse education. This is to be expected given that nurse education has only recently moved completely into higher

education. As Chapter 2 has indicated, previous studies on developing research in nursing have tended to focus very tightly on specific aspects of the subject and in general little consideration has been given to the wider learning system in which they are situated.

The preceding sections of this review have considered the relevance that work on differences between students in their conceptions of learning may have on their experiences of learning. This concern with individual differences needs to be balanced however, by an awareness of the effects that the wider institutional and departmental context may have on the ways in which research is taught and on students' perceptions on the value of this form of learning. The review also drew attention to the fact that the literature on student learning had been quite generic in nature and that there was a need to develop a study which looked specifically at an aspect of nurse education. In this study, it was considered important to gain a sense of how students view matters such as the links between research lectures and experience in the clinical areas, how students experience the teaching of research, how they go about the process of learning about research, the impact of assessment, and how they value research in terms of their own professional development. Accordingly, all these matters have been investigated in the present study and the relevant findings are reported in Chapters 6, 7 and 8.

In the next two chapters, the methodology adopted in the present study will be discussed, showing how it represents a variant of phenomenography which retains the contextual focus of the earlier research which identified approaches to learning. The method of interviewing and some aspects of the analysis are essentially phenomenographic, but the

focus is much broader to allow the influence of teaching and the differing learning environments to be considered in the subsequent analysis.

Chapter 4

The Theoretical Basis for the Methodology

Introduction

At the heart of scientific research are core philosophies that guide the researchers' choice of methodology and their approach for the questions being addressed. The discussion of methodology has been divided into two chapters. This chapter looks at the theoretical underpinnings and the rationale for the methods employed, while the following one describes the detail of how the study was carried out. The intention is to provide a clear account of all of the stages involved in the conduct of this study. This chapter focuses on the rationale for the research approach adopted, the underlying theory related to the research design, and the justification for the data collection techniques employed. It also considers potential strengths and weaknesses of the research design and its value to nurse education.

It should be noted to begin with that, in places, the first person is used. On occasion, I have chosen to write in the first person rather than use a more conventional, impersonal form of writing since it was important for me to make clear that I was responsible for the interpretation of the data. This point of style implies an awareness that interpretation other than the ones I am putting forward might be possible and plausible.

Rationale for choosing a specific research approach

My research aims required a method that would allow the perceptions of both students and lecturers about research to be described and classified. I was interested in how each group conceptualised their role, how they chose strategies for teaching or learning about

research, and whether they thought these were successful. I wanted to be systematic in my presentation of both sets of views, to allow the range of perspectives to be described in a form that facilitated a comparison with existing models of learning and teaching in higher education. At the same time I was keen to preserve the participants' voices as much as possible.

In examining the methodological literature, the complexity of choosing a research method became apparent. It was not simply a case of searching through the many research methods potentially available to ensure that I found one that would facilitate my purpose. Rather, it became a question of balancing those deliberations with the potential legitimacy and acceptability that the selected method might afford.

While I found convincing arguments that research methods should be chosen for their fitness for purpose, and I could accept that different knowledge claims are not universally embraced, I was aware of the ongoing nature of the Cartesian philosophical split that is the Qualitative versus Quantitative debate (Kellehar, 1993). Notwithstanding strong advocates such as Morgan (1983) for multiple research perspectives to be brought to bear on social phenomena, such arguments are rejected in many professions and by individual researchers within the research community. The desire for propriety, together with concerns to recommend ways of improving the effectiveness of evidence-based health care, has led the relatively new area of evidence-based practice to be dominated by positivist research methods.

Underpinning the debate about method are the differing theories about the nature of reality and how it may be known. While researchers who have followed the dominant

rational scientific paradigm of quantitative research do not deny the utility of qualitative research, they have tended to view it as an essentially exploratory, and therefore preparatory, stage of the research process (Bryman, 1988). For example, they may use qualitative methodologies as pilot work to elicit an emic view and follow that up with a more accepted conventional and objective study.

The casting of qualitative research in a junior partner role has led to a posture among those who advocate qualitative research that is at once defensive of qualitative methodologies and dismissive of the quantitative paradigm. This attitude has been augmented by a post-structuralist assertion that views positivism as methodologically flawed due to its reductionist stance, and as a reactionary process that places science within an explicitly political framework intended to control and ensure dominance (Hammersley, 1995).

While evidence-based practice has consisted of positivistic approaches, there has been an opposing trend, within nursing specifically, to identify research more closely with the qualitative paradigm. This is both a source, and a result, of tensions between those who align nursing with the rational scientific approach of other health-related professions, and those who seek a radical departure for nursing from the perceived paternalistic authority of medicine (Streubert and Carpenter, 1995). Bryman (1988) suggests that the growing assertiveness of qualitative researchers, coupled with disillusionment with quantitative methods, have resulted in an increasing appreciation of qualitative studies as ends in themselves.

Much of the conception of the quantitative/qualitative dichotomy is based on the distinction between nomothetic or ideographic reasoning (von Wright, 1993). While the rational scientific paradigm (nomothetic) seeks to establish general law-like findings, the qualitative paradigm focuses on more specific contexts (Bryman, 1988). Positivism has tended to convey a preconstituted reality external to the subjects, but the philosophical position underpinning qualitative research is seen as a commitment to explicating the subject's interpretation of reality which is seen as both internal and socially constructed (Bryman, 1988).

Within the quantitative paradigm, data collection is structured in advance by the researcher's use of measurement tools. Qualitative research data, in contrast, are seen as emerging freely from the topic being researched and qualitative data are frequently described as deep in that they can reflect a vivid, detailed portrayal of a small sector of social life (Bryman, 1988). This position is, however, misleading as data may be more or less structured by the researcher's line of questions and the degree of artificiality of the situation in which the data collection takes place. Furthermore, the decision about what constitutes data and what does not, lies in the hands of the researcher, as does the method and completeness of its recording. Indeed, Hammersley (1995) argues that the emphasis on competing paradigms exaggerates both the empirical differences and their impact on research practice.

Dey (1993) acknowledges the diversity of approaches in qualitative research, yet suggests that there is sufficient common ground to identify a range of procedures, characteristic of qualitative analysis and capable of satisfying a variety of research purposes. Mason

(1996) suggests that qualitative research should be broadly interpretivist based on methodology that is sensitive to social context and uses a system of analysis that involves understandings of complexities and richness of detail.

Streubert and Carpenter (1995) argue that qualitative research must demonstrate a commitment to the perspective of the participant and acknowledge the role of the researcher within the research with the idea of bracketing being introduced into qualitative research as an attempt to address researcher bias in a scientific manner (RCN 1996). Today it is recognised some personal bias will be present in any research design and cannot be ignored when embarking on a search for new knowledge (Schumacher and Gortner, 1992). The prior knowledge that affects subsequent interpretation is often referred to as pre-judgements, which Gadamer (1996) advocates being actively used in engaging with respondents as a way of developing new knowledge.

It is argued, then, that qualitative researchers can never be completely neutral or objective and therefore reflexivity is used to help in understanding the effects of the researcher on their own study (Smith, 1996). The essence of reflexivity is that the researcher is inextricably involved in the social world under study and has an awareness of that influence (Strauss and Corbin, 1990; Hammersley and Atkinson, 1995). Indeed, Mason (1996) believes that reflexivity should occur every time the researcher has to make a decision, for without such action researchers are failing to acknowledge the effect actions or decisions have on the meaning and context of the experience being investigated.

The previous chapter explored the development of the various studies that preceded the development of mainstream phenomenography and the outcomes of that research. It paid

particular attention to the focus on the context of studies in the early naturalistic experiments conducted in Gothenburg (Marton and Säljö, 1976; Svensson, 1977) and Lancaster (Entwistle and Ramsden, 1983) and highlighted how this emphasis changed as phenomenography developed. This particular detail was considered essential as the current study retains the strong emphasis on context evident in these studies and a more detailed account of this aspect is provided later in the chapter. However, the previous chapter did not describe the philosophical underpinnings of phenomenographic research, or justifications for, and criticisms of, that research approach. It is to this that we now turn.

Phenomenography – background

Phenomenography is an empirical research tradition that was developed to answer questions about thinking and learning, particularly in the environment of educational research. It's main concern rests with the relationships that people have with the world around them. The word phenomenography has Greek etymological roots. It is derived from the words phainonmenon (appearance) and graphein (description) thus; phenomenography is a description of appearances (Hasselgren and Beach, 1997; Orgill, 2003).

As was discussed in the previous chapter, phenomenography as a research approach emerged with a strongly empirical emphasis. It is only recently that a theoretical basis and specification of methodological requirements underlying phenomenography have been more plainly developed (Dall'Alba and Hasselgren, 1996; Marton and Booth, 1997; Bowden and Marton, 1998; Bowden and Walsh, 2000; Åkerlind, 2003). Correspondingly,

with the exception of a few early papers introducing phenomenography (Marton, 1981; 1986), there was no widely published literature addressing the principles and practices of the method until recently. The subsequent literature includes a collection of edited papers addressing methodological issues (Bowden and Walsh, 1994), a succession of papers in the early 1990's in the journal, *Nordisk Pedagogic*, which were later published as a book (Dall'Alba and Hasselgren, 1996), and a special issue of the Journal Higher Education Research and Development (HERD) in the same year and a book further developing the philosophical and theoretical basis of the approach (Marton and Booth, 1997; Åkerlind, 2003). More recently, Orgill (2003) and Åkerlind (2003) have presented papers that provide comprehensive reviews of the methodological approaches to phenomenographic research.

Phenomenographic research has been defined in terms of the object of study (Marton, 1981), often described as variation in human meaning, understanding, conceptions, or in more recent times, an awareness of ways of experiencing a particular phenomenon (Marton and Booth, 1997). The majority of phenomenographic research has concentrated on mapping variations in experience, in terms of the range of qualitatively different ways of experiencing particular phenomena and the inclusive relationships between the those different ways of experiencing (Åkerlind, 2003). However, with the development of a stronger underlying theoretical base to the research approach, there has been a growing emphasis placed on identifying the structure of awareness underlying the various experience of phenomena, in terms of key dimensions of variation in experience and aspects of the phenomenon that are more or less figural in awareness (Marton, 1994; Marton and Booth, 1997; Åkerlind, 2003).

What is phenomenography?

Marton (1981) provided an answer to this question by describing how the perspective claims to differ from other research approaches into conceptions of learning and to go beyond it. Two major characteristics of the perspective combine to mark it as phenomenographic, both involving relations between aims and methods. The first is an insistence on attempting to capture conceptualisations, which are faithful to the individual's experience of a selected learning phenomenon. This differentiates it from research that uses the preconceptions of the researcher to prompt thoughts about a suggested topic. The purpose not only distinguishes the kind of interviewing required but also relates to the status of the conceptions concerned. Secondly, in phenomenography the conception comes fresh from the individual's reflection on a particular experience. The researcher's identification of this experience is the prime influence prompting the conception, the conduct of the interview coming second.

In much other work the conduct of the interview is the prime influence, basically because prompts, drawn from the researcher's conceptions of the phenomenon concerned, are used to trigger responses from the interviewee. These tend to draw from what has been gleaned from a range of experiences i.e. from long-term, rather than relatively short-term, memory. It thus becomes more of a summary or general abstraction, lacking the detail and directness of thoughts and comments that arise from reflection on a particular episode.

Aim of phenomenographic research

Marton (1981) made a distinction between research undertakings belonging to either first or second-order perspectives. In first-order perspectives, the researcher is interested is

how something really is. However, in second-order perspectives, the researcher is interested in how phenomena are conceived. Our conceptions of, and our knowledge about, the world are not merely based on interpreted information from our senses, but are also dependent on our personal history. The only world which we can describe is the world as we experience it. In this way, there are, to a degree, several worlds to report about. It is the reporting about how these worlds appear, and about differences and similarities between them, that is the essence of phenomenography. The aim of phenomenography is therefore to describe different ways of experiencing phenomena in the surrounding world. Having access to a set of different ways of experiencing phenomena in the surrounding world is in itself an asset when trying to understand the nature of individual conceptions. Marton (1988, p. 147) claims, "It is the goal of phenomenography to discover the structural framework within which various categories of understanding exist. Such structures (a complex of categories of description) prove useful in understanding other people's understanding". As such, it aims to define the different ways in which people experience, interpret, understand, perceive or conceptualize a phenomenon, or a certain aspect of reality.

Phenomenographers seek to discover the many conceptions, or meanings, that specific groups of people have for a specific phenomenon. Since the focus of a phenomenographical study is on the conceptions that specific groups have of a given phenomenon, the conceptions of the researcher for that phenomenon are not usually the focus of such a study. Therefore, the researcher attempts, in as far as possible, to act as a 'neutral foil' for the ideas expressed by the participants of the study. These views are confirmed by Marton (1994, p. 4427) who claims, "As phenomenography is empirical

research, the researcher (interviewer) is not studying his or her own awareness and reflections, but that of the subjects." Marton (1981; 1994) claims that there are limited amounts of qualitatively different ways in which individuals experience a certain phenomenon. Such a theoretical stance indicates that it is irrelevant if those conceptions are considered correct or incorrect by current standards. The goal is purely to reveal the different possible conceptions that people report having about a given experience.

The outcomes of phenomenographic research

The results of phenomenographic research are presented as a hypothetical outcome space developed from the researcher's analysis and explanations of the shared experience within a sample group. According to Åkerlind (2003, p.2) "this is regarded as a space of variation, ideally representing the full range of possible ways of experiencing the phenomena in question, at this particular point in time, for the population represented by the sample group. It constitutes a description of the phenomenon, as experienced."

Åkerlind (2003, p.2) goes on to explain that the outcome space is represented analytically as a "limited number of qualitatively different ways of experiencing the phenomenon (called 'categories of description' to distinguish the empirically interpreted category from the hypothetical experience that it represents), including the structural relationships between these different ways of experiencing. The structuring of the outcome space involves highlighting key aspects or dimensions of variation that have been found, both logically and empirically, to link and separate the different ways of experiencing the phenomenon constituted in the outcome space."

The main results of phenomenographic research are categories of description of various conceptions of a phenomenon. However, phenomenographic research is about more than just reporting these different conceptions, it also involves discovering the conceptions and searching for underlying meaning and the relationships between them (Entwistle 1997). Below Marton (1981) explains this additional goal of phenomenography:

> "We are able to point not only to conceptions making up its constituents but also to relations between certain conceptions of one aspect of the world and certain conceptions of another aspect. What we have in mind is certainly not merely a listing of one conception after another. Some aspects are certainly more basic than others are and different (and more or less fundamental) layers of the perceived world can be revealed" (p.190).

Marton (1994) adds that the different ways of experiencing different phenomena or concepts are representative of different ways of dealing with those phenomena or concepts. "Some ways of dealing with phenomena or concepts are more productive. Thus, the conceptions, or ways of experiencing, and their corresponding descriptive categories cannot only be related, but sometimes can also be arranged hierarchically. The ordered and related set of categories of description is called the outcome space of the concept being studied" (Orgill, 2003, p. 2).

Assumptions of phenomenography

According to Svensson (1997) phenomenography, does not make suppositions about the nature of reality, nor does it claim that research results represent truth. Svensson (1997) explains

> "[Phenomenography does not have an articulated metaphysical foundation.] The question may be raised if it has implicit metaphysical assumptions. Individual researchers doing phenomenographic research may make such assumptions but they certainly vary between the researchers. It is possible to have any and all metaphysical positions within the main categories of materialism and idealism and do phenomenographic research. The tradition

is not based on any of these traditional beliefs and it is open in this respect". (p.165)

Whilst phenomenography makes no assumptions about the nature of reality, it does however, assume that conceptions are the result of relations between people and their experiences with the external world. Conceptions therefore result from a persons thinking about his or her external world. A central belief in phenomenographical research is that a person's conceptions are identifiable in various forms of actions, but above all through language (Svensson, 1997). There is a danger of a connection being made between phenomenology and phenomenography. Although similar in some ways, Uljens (1993) argues that phenomenography did not derive from phenomenological philosophy; it is based on more general assumptions and experience about the human mind rather than an extended theoretical stance. He maintains that since phenomenography as an approach has not emerged or been deduced from phenomenology, it cannot be identified as an application of, or another direction of, phenomenology but rather as an empirical approach in educational research.

Phenomenography therefore rests on a non-dualistic ontology, as the assumption is that the only world we can communicate about is the world as experienced. The epistemological assumption is that humans differ as to how the world is experienced, and that these differences can be communicated and understood by others. Hence, descriptions of similarities and differences in how the world is conceived constitute the most essential outcomes of phenomenographic research. It is argued that the relative strength lies on its emphasis on variation of experience of teachers and students.

To recap, this section of the chapter has explored the choices made in terms of research approach and design. It has also provided a detailed account of the aims and outcomes and assumptions upon which phenomenography is understood. However, just as adoption of methodologies from either of the research paradigms can be seen less as antithetical and more as a matter of suitability and focus, there are within the qualitative paradigm approaches to data collection that are more or less suited to particular research situations. We now move on to examine data collection techniques and begin with interviews.

Methods of phenomenography

Many possible sources of data can disclose a participant's understanding or conception of a particular phenomenon; the method of exposure in phenomenography is generally an open in-depth interview (Booth, 1997). Open indicates that there is no specific structure to the interview. Researchers may have a list of questions or areas they wish to explore during an interview, however, they are also expected to follow any unforeseen aspects that the interviewee might address. On occasion, some of these aspects may lead to rewarding new considerations that could not have been anticipated by the researcher. In-depth suggests that the interview will follow a certain line of questioning to their conclusion, or until the participant has nothing else to say or the researcher and participant have reached some kind of common understanding about the topics under discussion.

According to Rubin and Rubin (1995), the relationship between interviewer and participant is crucial, particularly in qualitative research. Phenomenographic research interviews are no different, with the interview technique being considered to be a central

part of the design. The method of interviewing is more open and interactive than is usually recommended (Entwistle, 2000), with a more relaxed situation being created to allow for reflection on experience. Interviewers are warned not to produce a clearly defined interview schedule. Indeed it is recommended that the phenomenographic interview schedule should "provide a set of areas to explore, with a logical ordering of themes and indicative probes, but no more than that" (Entwistle, 2000 p. 6). Questioning should focus on a specific piece of work or experience, with probes used to seek further clarification.

In phenomenographic research, the most important parts of the interview are establishing a good rapport and encouraging the participant to focus on their particular experience. Entwistle (2000) warns of the dangers of using abstract questioning as this may result in vague generalisations rather than a thoughtful reflection on the participant's own experience. The interviewer constantly tries to establish the underlying meaning of the respondent's comments, and uses prompts and probes to seek further clarification when required. In essence, the purpose of the interview is to encourage the participant to reflect on his or her experiences and then relate those experiences to the interviewer in such a way that the two come to a mutual understanding about the meaning of those experiences. Marton (1994, p. 4427) explains

> "Interviewer and interviewee jointly constitute the experiences and understandings. These experiences and understandings are neither there prior to the interview, ready to be 'read off', nor are they only situational social constructions. They are aspects of the subject's awareness that change from being unreflected to being reflected"

Issues of reliability and validity in phenomenographic research

Validity

Underpinning the discussion of both data collection and analysis methodology are the issues of reliability and validity. However, these notions need to be reframed within the context of the ontological and epistemological assumptions of the research approach being used. Phenomenography has much in common with the assumptions underlying other qualitative research traditions, and thus draws on their practices, as well as having differences that necessitate its own set of practices.

Validity is another word for truth (Silverman, 2000), and is generally regarded as the extent to which a particular study is seen as investigating what it aimed to examine, or the degree to which the research findings actually reflect the phenomenon being studied. Uljens (1996) explains that in phenomenographic studies more importance is placed on how well the research outcome compares to the human experience of that situation rather than, as it exists 'in reality'.

As already explained, qualitative research can never be objective and consequently in phenomenographic studies the focus of quality of research shifts to ensuring that the research aims are suitably reflected in the research methods adopted (Bowden, 1994; Ashworth and Lucas, 2000). Two types of validity checks are practised in phenomenographic research – communicative and pragmatic validity, however, the extent to which they are utilised varies.

Communicative validity refers to how persuasively the operation and interpretation of the data has been argued within a context where the researcher is selecting from a range of

possible interpretations (Booth, 1992; Sandberg, 1994; Marton and Booth, 1997; Åkerlind, 2003). Both the research methods and the interpretation of data need to be regarded as suitable by the relevant research community. Generally this is achieved through presentations at research seminars, conferences or publications in peer-reviewed journals. Alternative sources of feedback could include other members of the population represented by the sample group or, if different, the intended audience for the findings (Uljens, 1996). However, unlike phenomenology (where interpretation of data is often checked with the interviewees) checking one's categorisation of an interview with the original interviewee is not normal practice for three main reasons. Firstly, interpretations are made on a collective rather than an individual basis in order to capture a range of understanding within a particular group. Secondly, interpretation may go beyond an individual's explicit understanding at the time of the data collection due to the search for underlying, often implicit, meaning. Finally, ontological assumptions underlying phenomenography suggest that individual experience of a phenomenon is context sensitive and may change with time and situation.

Pragmatic validity includes the extent to which the research outcomes are seen as useful (Sandberg, 1994), and the extent to which they are meaningful to their intended audience (Uljens, 1996). Phenomenographic research outcomes are principally judged in terms of the insight they offer into more effective ways of operating within the teaching and learning arena (Marton and Booth, 1997). Entwistle (1997 p. 129) explains in relation to validity judgements for researchers in higher education that "the test is generally not its theoretical purity, but its value in producing useful insights into teaching and learning".

Such views are not dissimilar to Mishler's (1990) perspective on validity in qualitative research, which involves reformulating validation as a social construct of knowledge. He stresses that the key issue relates to the extent to which a relevant community of scientists evaluates research findings as sufficiently trustworthy to rely on them for their own work. Mishler (1990 p. 420) stresses that concentrating attention on trustworthiness, rather than truth, "displaces validation from its traditional location in a presumably objective, non-reactive, and neutral reality, and moves it to the social world". He goes on to provide a clear picture of what he sees as the main questions that should be addressed in validating qualitative research. He suggests that the questions to be asked of study, within any research tradition, are

> "What are the warrants for my claims? Could other investigators make reasonable judgement of their adequacy? Would they be able to determine how my findings and interpretations were "produced" and, on what basis, decide whether they were trustworthy enough to be relied upon for their own work?" (p. 420).

He goes on to argue that the transitional status of truth within this paradigm does not lead us to an empty relativism or the solipsism that Phillips (1993) suggests must follow. Methods continue to be assessed for consistency and utility against criteria of trustworthiness that is itself continually reviewed and renewed as appropriate. Since trustworthiness within Mishler's (1990) criteria requires peer examination, then what Bryman (1988) calls constitutive ethnography, i.e. detailed and intricate descriptions of patterns of interaction, and sequences of events, stressing the importance of retrievable data and allowing alternative interpretations are a pre-requisite for valid qualitative studies.

If one is to accept the above view of validation as an essentially social process, a much more explicit and detailed account of the process of conducting research and of analysing the material collected is required and every effort has been made to provide such detail here. However, there are obvious limits to the extent to which the methodology of a study can be made fully clear and, in reporting it to others, there is a tension between the need to make procedures fully visible on the one hand, and the need to provide a clear, coherent story, which is not burdened with unnecessary detail. Guidelines that on the surface may appear easy to address can, in fact, be extremely difficult to implement.

Reliability

Reliability refers to the use of appropriate methodological procedures for ensuring quality and consistency in data interpretations (Guba and Lincoln, 1981). Two forms of reliability are commonly used in qualitative studies - coder and dialogic reliability checks (also referred to as inter-judge reliability). Both involve the use of several researchers to avoid the potential impact of having only one researcher's perspective on the data. Both approaches have been used in phenomenographic studies to varying degrees; however, neither approach has been uniformly used (Åkerlind, 2003). Some phenomenographic researchers (Prosser, 1994; Marton, 1996) argue for the value of employing a coder reliability check, while others (Sandberg, 1996; 1997) suggest that such an approach directs attention away from more fundamental checks of research reliability, such as the procedures for achieving faithful description of the data.

Both Bowden (1994; 1996) and Prosser (1994) argue strongly for the use of dialogic reliability checks. Säljö (1988) claims that such actions measure "the communicability of

categories and thus gives the researcher information that someone else can see the same differences in the material as he or she has done"(p. 45). It is a form of interpretation of the data collected, rather than of the data itself. Yet, the collection of the data – the interview - still remains unreliable in this sense. Additionally, categories of description are based on the analysis of a set of interview transcripts as a group, and not on an individual transcript basis. Therefore, a single transcript may represent more or fewer aspects of the phenomenon being investigated than does a single category of description, making one-to-one matching of transcripts and categories of description difficult (Sandberg, 1997).

A more common practice in pursuing these particular forms of reliability is for the researcher to make their interpretative actions clear to the readers by detailing the steps taken and presenting examples that illustrate them (Sandberg, 1996; 1997). Such an approach requires researchers to adopt a critical attitude towards personal interpretations that indicate how they have analysed their own presuppositions and the checks that have been used to counteract the effect of their particular perspectives on the outcomes of the research.

The core question of credibility in phenomenography concerns the relationship between the empirical data and the categories for describing ways of experiencing a specific phenomenon. The researcher has to show that the chosen way of describing differences and similarities is well supported by the data. This is achieved by providing excerpts from the interviews to support the relevance of the categories. The credibility of the study

is based on a clear description of each part of the research process, explicit presentation of the focus of the interview and careful description of the analysis.

Data analysis

Throughout data analysis, a phenomenographic researcher will work to identify qualitatively distinct categories that describe the ways in which people experience different concepts. Phenomenographers consider that a limited number of categories are likely for each concept under study. These categories can be discovered by immersion in the data, which, in the main comes from transcriptions of interviews (Booth, 1997).

The researcher scrutinises the transcripts of several participants' interviews, searching for both similarities and differences among them. Throughout this process, initial categories that describe different participant's experience of the given phenomenon are identified. If the interview has covered numerous topics or various aspects of a given phenomenon (as was the case in this study), the researcher will attempt to develop an outcome space that includes the minimum number of categories that explain all salient variation in the data.

Marton (1986, p. 43) says, "definitions for categories are tested against the data, adjusted, and adjusted again. There is, however, a decreasing rate of change, and eventually the whole system of meanings is stabilized". Therefore, once these initial categories are identified, the researcher re-examines the interview transcripts to establish if the categories are sufficiently descriptive and indicative of the full data set. This process generally results in alteration, addition, or removal of the category descriptions. Finally, a third examination of the data checks for internal consistency of the categories of

description. This process of modification and data review persists until the customised categories seem to be consistent with the interview data.

Once a stable outcome space has been defined, Marton (1994, p. 4426) suggests that the researcher attempts to develop "as deep an understanding as possible of what has been said, or rather, what has been meant." To achieve this, the researcher needs to consider not only specific categories of description, but also how the individual categories relate to each other and how one person's conceptions compare across different topics.

To assist the above process Marton and Booth (1997) present three primary criteria for judging the quality of a phenomenographic outcome space:

- That each category in the outcome space reveals something distinctive about a way of understanding the phenomenon;
- That the categories are logically related, typically as a hierarchy of inclusive relationships; and
- That the outcomes are parsimonious, i.e., that the critical variation in experience observed in the data be represented by a set of as few categories as possible.

General principles of phenomenographic analysis

Åkerlind (2003) highlights the importance of attempting, as far as possible, to maintain an open mind during data analysis. This involves minimising any pre-determined views or too rapid foreclosure in relation to the nature of the categories of description. Åkerlind (2003) also emphasises the need to constantly adjust one's thinking in the light of reflection, discussion and new perspectives. He goes on to explain "maintaining a focus on the transcripts and the categories of description as a set, rather than on individual

transcripts and individual categories of description is also essential. The reading of individual transcripts and defining of individual categories should thus occur within the context of identifying similarities and differences amongst transcripts and relationships between categories, as a group".

Any analysis usually starts with a search for meaning, or variation in meaning, across interview transcripts, and is then enhanced by a search for structural associations between meanings. Most researchers concur that the establishment of meaning and structure is a shared one, however, for some an importance is placed on of not prioritising the search for structure too early in the process, as this may lead to not truly appreciating aspects of the meaning to be found in the data (Ashworth and Lucas, 2000; Åkerlind, 2003). In the preliminary stages of data analysis, reading through transcripts is characterised by a high degree of openness to possible meanings. Successive readings become more focussed on specific aspects or criteria, but still within a framework of consideration to new explanations, with the ultimate aim of revealing the whole by focussing on differing perspectives at different times (Åkerlind, 2003).

The whole data analysis process is a strongly iterative and relative one, involving the continual categorisation and recategorisation of data, plus ongoing contrasts between the data and the developing categories of description, as well as between the categories themselves. A principal feature of the establishment of the categories of description is the search for key qualitative similarities within the differences between the categories. Consequently, transcripts or selected quotes are grouped and regrouped according to apparent similarities and diversity along varying criteria. On occasion the groupings go

before explicit description of the similarities and differences, on other occasions the groupings are made according to provisional descriptions for categories, as a validation procedure. "Categories are tested against the data, adjusted, retested, and adjusted again. There is, however, a decreasing rate of change and eventually the whole system of meanings is stabilized" (Marton, 1986, p. 42).

Variation in analysis and emphasis placed on collaboration

Several descriptions of analysis in phenomenographic research are available (Marton 1986; Svensson and Theman, 1983; Prosser, 1994; Bowden, 1994). Examination of these accounts demonstrates two clear areas of variation in terms of the strategy employed in analysis. The first highlights how much each transcript is considered at each time and in the second addresses the emphasis placed on collaboration with other researchers during the analysis process. Practice varies from considering the whole transcript (Bowden, 1994), or large sections of the transcripts related to a particular issue (Prosser, 1994), to the selection of smaller excerpts or quotes seen as representing particular meanings but interpreted within the larger interview context (Svensson and Theman, 1983; Marton, 1986). In the latter strategy, the smaller chunks are separated from the transcript and combined for analysis.

Apart from Bowden (1994), there is little published debate for, or against, the two strategies. The underlying argument in support of the first strategy appears to be that the whole transcript should be seen and treated as a set of interrelated meanings, which can at best be understood in relation to each other. If one accepts this perspective, it could be

argued that the second method is in danger of reducing appropriate consideration of the context within which the selected quotes were made.

Proponents of the second strategy (Svensson and Theman, 1983; Marton, 1988) acknowledge the importance of considering the larger context, but suggest that working solely with whole transcripts presents the danger of encouraging an individual rather than a collective focus in data analysis. Additionally, working with full transcripts may reduce the clarity of the key aspects of meaning, because the meaning a phenomenon holds for an individual may vary during the course of an interview. It could be argued that such variation is part of the study and therefore should be included in any analysis. However, from a practical point of view, it is true that some statements in interviews do address the research questions more directly. Consequently, selecting excerpts that appear to exemplify meanings present in the larger interview, while omitting perceived irrelevant or redundant components, should assist in making the data more manageable (Svensson and Theman, 1983).

Another key variation highlighted in the literature lies in the emphasis placed on collaboration during data collection. Some (Bowden, 1994; Walsh, 1994; Trigwell, 2000) support the importance of bringing in additional researchers during analysis to encourage greater awareness of alternative perspectives, as a way of improving the development of categories of description. However, the large number of doctoral studies conducted using this approach suggests that high quality phenomenographic research can be accomplished by an individual researcher, even if a group of researchers might have taken that understanding further.

Criticisms of phenomenography

One of the criticisms of phenomenography is its tendency to equate students' experiences with their accounts of those experiences, as Marton (1994, p. 71) confirms by stating that "conceptions, the focus of phenomenographic studies are ways of experiencing". Säljö (1994) raised several issues about the course phenomenography has taken since the early studies. Two themes are of particular relevance. The first relates to his criticism that "phenomenography has a weakness in its lack of a theory of language and communication, and its almost dogmatic disregard of paying attention to why people talk the way they do" (p.71). Given the heavy reliance on interviewing as a means of data collection within phenomenographic studies, this criticism would seem to be significant.

The second theme concerns the entities or notions put forward within phenomenography as part of its analytic framework. One such notion, about which Säljö (1997) makes critical comment, is conception. He claims that these entities or notions have become the focus of phenomenography to such an extent that they "seem to have become more important that the attempts towards unbiased inquiries of learning and thinking" (p.174). He goes on to argue that, at times, there appears to be discrepancies between what researchers observe of a participant's experience with a particular phenomenon and how the participant describes his experience of the phenomenon. Richardson (1999) claims that phenomenographers do not sceptically examine the effects of the interview environment or of socially accepted linguistic practices on what is reported by the students.

In order to avoid equating experiences with accounts of experiences, Säljö (1997) suggests that we refer to studying people's different accounting practices of phenomena, which are public and accessible to study, instead of referring to studying people's experiences. We must keep in mind however, that such accounting practices may be socially and environmentally influenced (i.e. the student might say what he thinks the interviewer wants to hear, etc.).

It may well be the case that people's accounts of their experiences are not equivalent to the ways in which they experience the phenomenon, however, the only way we can begin to understand the ways in which people experience a given phenomenon is to ask each participant to describe his or her experience of it. We, as researchers, can make observations of what people experience, but those observations will not tell us how they experience a given particular phenomenon. This is even more the case if we accept the idea that conceptions, or ways of experiencing, are products of an interaction between the person and the phenomena experienced. Phenomenological results may not be truth in that they may never accurately describe ways of experiencing, but they can still be useful if interpreted cautiously.

One of Webb's (1997) main criticisms of this approach is the assumption that such researchers can be 'neutral foils' while analyzing research data. It is more reasonable to assume that researchers have had certain experiences and hold certain theoretical beliefs that will influence their data analysis and categorization. Webb calls for researchers to make their backgrounds and beliefs explicit, not because having these backgrounds and

beliefs is bad, but rather because the readers and users of phenomenographic research need to be informed about all the variables that have potentially affected the study results,

Other researchers have questioned the reliability and repeatability of phenomenographic studies. On the issue of reliability, Marton (1986) agrees that it is possible that two different researchers would discover different categories of description while working on the same data individually. However, once the categories have been found, they must be described in such a way that all researchers can understand and use them. Marton (1986) compares this process to a botanist that discovered a new plant species on an island. If the new species does not appear to fit into an already existing category, the botanist must develop a new category of classification for it, and it is highly probable that a separate botanist would develop a qualitatively different category for that new species. However, once the botanists has developed and described a category, the category is now accessible and available for classifying plants that the botanist finds. Indeed, once the category is developed and described, it becomes useful to others who use the results of study.

Potential benefits of phenomenography to nursing education

There are certain benefits to using the results of phenomenographic research in a higher education institution. At this level of instruction, students are generally encouraged to develop conceptual understandings (Entwistle, 1997). It is often the goal of teachers to help their students to develop conceptions that are consistent with those held by recognised experts in various fields. However, students often show a range of conceptions of a phenomenon, many of which are not consistent with the conceptions held by experts. Marton (1986) claims that "a careful account of the different ways that

people think about phenomena my help uncover conditions that facilitate the transition from one way of thinking to a qualitatively 'better' perception of reality" (p. 33). Bowden and Marton (1998) argue strongly that phenomenographic information about the different conceptions that students hold of a particular phenomena will be useful to teachers who are developing ways of helping their students experience or understand a phenomenon from a given perspective.

The study context

Both Säljö (1994) and Francis (1993) have stressed the importance of the context in which a particular research study is conducted. They criticise the lack of focus on this particular aspect within mainstream phenomenography and present strong arguments for its retention. Säljö (1994) describes phenomenographic research as "being based only on discourse data that gives access to only what people say" (p.71). The focus in phenomenographic research is typically on something that was being said, which is on the content of the discourse. In particular, the content is considered in terms of the way in which the aspect of reality under investigation is experienced (or conceived). The content is to be treated not in terms of statements divorced from their context, which Säljö (1994) criticises, but according to the meaning in the context of what else was said.

The above remarks indicate that a level of context, dealing with the social and cultural practices within which discourse is embedded, is overlooked within phenomenography. Little attention has been paid to this aspect within the phenomenographic literature and Säljö (1994) presents a challenge to those involved in this form of research to take account of the embeddedness of experience in social contexts. He notes that content and

context are inseparable and refers to both the discourse as a whole within which each issue or theme is discussed and, more broadly, the social and cultural practices which give meaning to what is said and allow it to be understood. Neither content nor context should be emphasised at the expense of the other. Francis (1993) raises the same issue.

> "The recent strong emphasis in research on treating the interview as a form of narrative and analysising it in such terms (Mishler 1986) should be respected for its insights, but not followed in such a way that it deflects interest from the way the interview serves the main analytic objectives of the research" (p. 71).

In describing an interview situation in which a learning experience is explored she goes on to say "the dialogue will shift between two realities —that of the learning experience and that of the interview experience" (Francis, 1993, p. 72). Whether or not we agree that these two contexts represent two realities, this comment highlights the notion that the content of the interview has a referent that extends beyond the interview itself, namely, an experience of an aspect of reality. Should it be argued that, within discourse analysis, the interview could be delimited as the only situation relevant to an exploration of the way in which an aspect of reality is experienced, questions can be raised about the meaningfulness of such delimitation. Most problematic would be the assumption that segments of life can be thereby artificially separated from the remainder.

Säljö (1994) raised a future issue that relates to the situated nature of human actions. He argues that "the particular understanding of how people conceive the world that characterises phenomenography decontextualises human actions (and talk) from the concrete practices that trigger them and of which they form a part" (p. 73). Hence he questions the extent to which the results of phenomenographic research remain embedded within the practices from which they were drawn. He develops further the issue of

context when he claims that "the recontextualisation does not seem to work on all occasions since the end product does not always generate food for thought or clues to action" (Säljö, 1994 p. 73). Through this claim he questions the usefulness of the results to the context from which they were derived and their significance for the scientific development to which they are intended to contribute. These are essentially questions about the meaningfulness of the results of phenomenographic studies and their relevance to, and beyond, the contexts within which these studies were carried out.

Säljö (1994) also raises the question about whether changes in conception will be maintained when moving into a new context. It is not necessarily the case that a change in conception will always penetrate other areas of understanding within the same field (see, for example, Dell'Alba, 1993) or all areas of life. On the contrary, the contextual nature of conceptions has been a recurring issue within phenomenography. However, the implications of this contextual nature of conceptions for phenomenography as a research enterprise have not been thoroughly explored within the literature.

It is for this reason that the form of phenomenography used in the current study reverted to the earlier approaches used in the original Gothenburg studies, and particularly those used in Lancaster, to focus on everyday studying and students' experiences of teaching and assessment – the teaching–learning environment. As already indicated, the term 'contextualised phenomenography' has been adopted to make this important distinction. The next chapter considers why this form of phenomenography was chosen against other qualitative methods that could have been chosen, before reporting on how the study was

conducted, and how the actual methodology adopted varied from mainstream phenomenography.

The Process of Conducting the Study

Introduction

To recap, three main aims underpinned the study. The first was to investigate the contrasting perceptions of mental health nurse students and teachers of the research component of the Project 2000 programme. The second was to consider the influences of the learning environment on the quality of learning within the research component, as perceived by the participants, and the implications of these influences for the future development of teaching research within nursing programmes. The third aim was to compare the findings of this study with previous models of teaching-learning environments and so develop a conceptual model to summarise the conclusions reached.

Having explained mainstream phenomenography thoroughly in the previous chapter, I can now explain why a variant of this approach was chosen to guide the methods used in this study and the consideration that was given to other qualitative methods.

Range of potential methodologies available

As the previous chapter has demonstrated, educational environments, like all social situations, are perceived differently by those who experience them - those who are participants in them and those who observe or research them. For each person the experience is also different, leading to varying views about what occurred and why, whether it was a success or a failure, and whether it was good or bad. I was of the view that an understanding of differing experiences of both lecturers and students in learning and teaching about research would be enhanced by an application of these diverse

perspectives. However, in following this research aim I was conscious of the value that my conclusions might generally have within the nurse education research field. I therefore needed a research approach that represented these considerations as much as possible.

In exploring the range of potential methods available, I concluded that my research aims would be better served by a qualitative approach. I expected that there was not one reality, but many, which would describe the experiences of both lecturers' and students' experience of learning and teaching research. The starting point for the study was an attempt to build an understanding of experiences and perspectives of the participants not a hypothesis to be tested

Before moving on it is important to outline the consideration that was given to other potential qualitative designs and why these were not considered appropriate for this study. Qualitative designs range from pure description for example, phenomenology, to description and interpretation, such as hermeneutic research or description, interpretation, explanation and action evident in action research (Marton and Booth, 1997). However, all are concerned with ensuring that the original voices of the participants are preserved but, as these methods incorporate greater explanatory content, the voice of the researcher is added to that of the participants.

Variations arise between qualitative methodologies in relation to the object of their inquiry, the purposes to which the research will be applied, the aim of the research, the nature of the data, and the role of the researcher. Each design is based on its own philosophical orientation, which in turn influences purpose, sampling, data collection and

analysis (Brink, 1989). Four potential qualitative research designs were explored-ethnography, grounded theory, phenomenology and phenomenography.

Early on in the study I concluded that an ethnographic design would not suit my purpose. This was because the aim of ethnography is to understand people, their ways of living, and the ways that people use cultural meanings to organise and interpret their experience (Leininger, 1985; Clifford, 1997). This focus on culture is the essence of ethnographic research and distinguishes it from other qualitative designs. The researcher takes on the role of a participant or non-participant observer who enters the culture or sub-culture to study the rules and the changes that occur over time (Burns and Grove, 1993; Clifford, 1997). This design was considered unsuitable for two main reasons. Firstly, I was a lecturer involved in teaching research and would have found it difficult to be objective within such a role. Secondly, my primary interest was not the culture of students or the lecturers as distinctive groups.

Another possible method was grounded theory (Glaser and Strauss, 1967). I had been strongly influenced by this approach in the early part of the study. This approach uses similar data collection and analysis processes to phenomenography; however, it differs in two important aspects. Firstly, excerpts from the transcripts are analysed, rather than whole transcripts. For the purposes of this study it seemed essential to retain the whole transcripts and to use them in the iterative way adopted in phenomenography. Secondly, while grounded theory shares with phenomenography a focus on extracting the underlying conceptions of what has been said, grounded theory is often conducted from a perspective which searches for the unconscious intent of the interviewee, rather than the

integrated, situational and personal focus which is the trademark of phenomenography - the contextual form which was adopted for this study.

Both phenomenography and phenomenology are used to study and describe people's experience of phenomena. I believed phenomenography was more appropriate for this research study for two main reasons. Firstly, phenomenology presents a collection of separate individual's perspectives, whilst phenomenography presents the range of perspectives in a collective system of categories of description that aims to capture the reality of the different ways of experiencing the phenomenon. The research task in phenomenography lies in both describing phenomena as others experience them, and also, more importantly, in describing the variation in these ways of experiencing. The similarities and the differences between the ways people experience or see phenomenon is the significant points of interest (Marton and Booth, 1997).

In phenomenology, the study population is typically small because the interest is in thick and accurate description (Holloway, 1997). Each individual experience is expressed from a variety of angles. A phenomenological study might be the expression of just one person's experience. Typical questions asked may include 'How does the student experience their world?' or from a personal perspective, 'How did I experience this incident?' On the contrary, because of phenomenography's focus on identifying and mapping the different ways which people experience a phenomenon, the study population is according to Bowden (1996) typically larger and can be the range of fifteen to twenty useable cases. A possible question from a phenomenographic perspective could be 'What are the critical aspects of ways of experiencing the educational world?'

As we saw in the previous chapter phenomenography was developed and relates specifically to the educational context. A research approach that recognised the educational context was particularly pertinent, and arises from two assumptions made within phenomenography. First, the notion that people's ways of experiencing phenomena results from the unique interaction of their understanding of the phenomenon and the situation in which they must apply that understanding (Bowden and Marton, 1998). People experience a phenomenon in actual situations, linked in that experience is understanding, action and their perception of the situation. Participants in this study were asked to relate their experiences of the educational context by describing what they thought they had done in one specific area of study. Consequently, what I had captured was not their understanding of research in the abstract but rooted within real instances of teaching and learning, in the way that was done in the Lancaster study (Entwistle and Ramsden, 1983) discussed in the previous chapter.

The second assumption of phenomenography is that people experience the world differently. Their experiences differ because individuals vary in their understanding and perception of phenomena and situations. Each person will distinguish, at any one time, different elements of the phenomenon and the situation. Some will be aware of certain relationships between the elements of the situation, whilst others will be aware of, or perceive, other relationships. How people layer their awareness and understanding of phenomena and situations affects their ways of experiencing those phenomena. In the end it came down to a choice between thickness of description of the experience of some lecturers and students (phenomenology) or mapping the range of perspectives of those

concerned on each site (phenomenography), I chose the latter because such a systematic presentation was missing from the nurse education literature.

To sum up, what I have called 'contextual phenomenography' offers a qualitative research approach that is empirical, representative and yet, at the same time, descriptive. It permits people's perceptions and understanding of phenomena within educational contexts to be described and categorised by providing a way of presenting and using people's direct experiences of an element of educational life. Finally, it represents a justifiable solution between the competing considerations that I investigated whilst choosing an appropriate research method.

Sampling process

A key methodological decision for researchers relates to sampling. The sampling technique used was purposive sampling as this allowed me to choose cases because they illustrated specific features related to this particular study. However, Silverman (2000) warns that this approach "does not provide a simple approval to any case we happen to choose"(p.104). Rather such a technique demands critical thought about the parameters of the population and careful choice of cases. It is crucial to obtain a purposive sample of participants who are known to have views and attributes related to the area of interest (Dempsy and Dempsy, 1996; Field and Morse, 1996; Clifford, 1997).

At the time of data collection there were twelve institutions in Scotland that provided pre-registration programmes for nurses. Given that this was a qualitative study, it would have been too ambitious to draw samples from them all. However, only four of the institutions prepared students for all branches of the programme and therefore, in theory, may have

had similar learning and teaching experiences. Three case studies were selected from this group. The mental health group of students on each site was small in number (average 8, see Table 2), consequently, the total population at each site were approached and agreed to participate in the study. In addition, the Heads of Department selected a sample of the teaching staff from each site. There were three from Site one and two from Sites two and three. In all cases they agreed to participate. The total group of 7 lecturers was deemed to be representative of the staff that was responsible for the research content of the various programmes. These groups of staff and students were seen to fit the criteria suggested by Sullivan (1996). All participants had the opportunity to decline to participate or to withdraw from the process at any point.

My position as a research lecturer within one of these four institutions was another sampling consideration. It would have been unacceptable to use my own institution, as I felt I was too close to the development, the students and the research teaching team. My initial intention was to treat each site as a single case study and then compare the findings across the sites. However, as the study developed it became apparent that there were more similarities than differences across the sites. Consequently a decision was made to pool the data from the three sites. This then allowed the perceptions of lecturers' and students' experience of the research component as two separate groups to be identified and subsequently compared.

The use of only three of the twelve sites can be seen to have advantages and disadvantages. One disadvantage is that a more representative sample would have been likely to reveal a wider variation on teachers' views of the purposes and nature of the

research component of the Project 2000 Programme. Experienced researchers may also possess a different quality of teaching from their less experienced or successful peers. For example, it was noted in Chapter 2 that many of the teachers in nurse education agreed that they were not adequately prepared to do research, let alone teach it to the student group.

Teachers interviewed in this study demonstrated a range of knowledge and skills, from limited theoretical knowledge to active researcher. It is, therefore, explicitly recognised that caution needs to be exercised in generalising from the experience of the sample, although the variation was not atypical of what is known about the population at large. I chose to conduct the study within the area of mental health nursing because this is my own area of expertise. An additional sampling consideration was that the student groups tend to be small (on average 6-8 students per group), thus allowing me to use the whole group, rather than a selection of a group, which would have been the case in the adult branch of the programmes.

Table 2 **Description of the Sample**

Site	Potential participants		Actual participants	
	Lecturers	Students	Lecturers	Students
Site 1	3	8	3	8
Site 2	2	8	2	8
Site 3	2	6	2	6
Totals	7	22	7	22

Preparation for the study

When this study was being planned, an application was made to the Local Ethics Committee for approval to conduct the study, as this was a requirement of some of the educational institutions from which access to students and staff was sought. Following some minor amendments to the participant consent form, the Lothian Healthy Volunteers Research Ethics Sub-Committee granted ethical approval. It was recognised that interviews that were tape-recorded could cause some anxiety. In order to minimise this, and to follow published ethical guidelines (Field and Morse, 1996; Holloway and Wheeler, 1996), all participants were provided with an information sheet which outlined the rationale for the study and explained what would be involved in both the interviews and the focus group discussion (Appendix 1). At the beginning of all the interviews and the focus group discussions this issue was once again addressed and, when agreement was reached, the participants were asked to sign the informed consent form (Appendices 2 (students) and 3 (staff). During interviews participants were offered the choice of whether they wished to be tape-recorded or not, but in the event all participants allowed it to take place. I also took account of the possible effects for the students involved in the research and how this might influence the participant's future views on ethical issues in research.

Students were assured of confidentiality, and the tapes were kept secure throughout the study. Tapes were transcribed and transcripts contained codes to identify the participants, but the list of names was kept separate from transcripts and any notes (Hammick, 1996). Access to tapes and transcripts were restricted to myself and my supervisor and all details and tapes were destroyed at the end of the study. In the final report, participants are not

individually identified by name, rather a pseudonym has been attached to each participant and their views and perceptions are discussed in this context.

Access to the research sites

The research application was approved by each of the identified sites. Access to the sites was through the College Principals, who were approached by letter. Included in the letter was a copy of the research proposal, which provided some background to the study, outlined the main aims of the study, and included copies of the student and staff information sheets and the participant consent forms for both the students and staff. Also enclosed was a copy of the letter of ethical approval from the Healthy Volunteers Studies Research Ethics Sub-Committee. The response from the Principals in all cases was positive.

All three colleges were approached at the same time and access to mental health students in the branch section of their programme was requested. Each institution was also asked to identify at least three members of teaching staff who were involved in teaching the research curriculum and who could be approached by the researcher. This specific request was difficult to accommodate for two main reasons. Firstly, nurse teachers were involved in a number of strands in the curriculum and, secondly, they did not see themselves as 'specialists' in relation to research but suitable individuals were identified, nevertheless. Finally, each institution was requested to provide an up-to-date copy of the programme curriculum.

This study took place just four years after the implementation of the Project 2000 curriculum. As with any new curriculum, amendments are made as the process of

implementing the curriculum takes place. Not all institutions provided the full set of curriculum documents initially, with several requests being needed in some cases. However, all curriculum documents were received prior to the first set of interviews and this gave me time to examine the documents and establish an overview of how research was represented within the documents. It was valuable to gain an insight into the ways in which the research component was represented within curricula, the number of hours allocated to it and the teaching methods that were employed to deliver this section of the programme. In addition, I was interested in establishing how this section of the curriculum was assessed, and in the facilities that existed in each institution to support the research agenda.

Pilot study

Prior to commencing the main study, data collection techniques were piloted in my home institution. Five students and two lecturers were approached, the students being in the branch stage of the mental health programme. In line with the study design, students and lecturers participated in individual phenomenographic type interviews. Following a period of time in the practice area, the students participated in focus groups, which were recorded and transcribed. Some of the original areas in the interview schedules were amended following feedback from the student group. However, in the main, both groups indicated that the schedules were clear. The analysis of the interviews and the focus group provided further insights into areas for further examination and suggested how probing might be used to examine, in detail, various students' learning strategies in relation to research.

Research role

The presence of a researcher in any educational setting will always have an effect on the nature of interactions that take place in that setting. As each site was some distance from my own institution, I chose to stay on campus for the duration of the interviews and to revisit for the focus group discussions. In all, each site visit lasted from 10 to15 days. In order to minimise the effects of my presence, I adopted a field role in which I attempted to be unobtrusive. It seemed important, not only for my own research purposes, but also to respect the student and staff rights, to have a smoothly running block period. At the same time, I attempted to give an account to all participants of my general research purpose. I spent time in the library, and the student and staff common rooms, and made a point of interacting socially with participants.

Being present in the institution on a daily basis and meeting informally with the participants before and after interviews allowed the participants to become accustomed to my presence. Whilst the degree of acquaintance between the participants and myself may have been limited, the interviews were sometimes the second occasion of meeting. This may well have facilitated a more informal and involved atmosphere. Attempts are made at several points in the presentation of material from the student and teacher material to provide contextual information, which may be necessary to make an interpretation of individual quotations.

Process of conducting the individual interviews

The interviews aimed to encourage participants to comment on specific aspects of their experiences of research within the programme, both in the institutional setting and the

practice areas. The specific aspects which informants were requested to discuss are listed in Appendices 4 (staff), 5 (students), and 6 (focus groups). It seemed inappropriate to specify my actions within individual interviews beyond this general level of the topic choice for a number of different reasons. Firstly, specifying my own actions in some detail in advance of the interviews could considerably reduce the extent to which the informants could control the direction in which they wished to pursue topics. Secondly, an attempt to standardise my own procedures across interviews would also have been markedly inconsistent with the view of talk, social interaction, and the local, situated construction of meaning. Finally, even had a standardised procedure been desired, a considerable amount of research evidence clearly indicates that this is an unattainable ideal (Brenner, 1981). Mishler (1986, p. 44) notes "25-40 percent of the questions asked by interviewers depart significantly from the wording of the questions in the schedule".

It was not likely that many of the student informants would have spent much time thinking carefully about their position on various aspects of the research component of the Project 2000 curricula. It therefore struck me as important to provide them with a series of topics during the interviews that would assist them to formulate their thoughts and establish positions. The circumstances for the teacher participants was different; as expert practitioners, they could be expected to have thought through issues concerning the planning and delivery of the research component of the nursing curricula and to have formulated distinct views on a variety of related matters. Consequently, it seemed less desirable to have as clear-cut a research agenda as was the case with the student interviews.

Since my research purpose was to elicit the perceptions of both lecturers and students about their experiences of teaching and learning about research I chose to use phenomenographic interviewing as the major source of data collection. However, interviews offered just one opportunity to meet with the participants. While I was satisfied that this was sufficient to meet my aims with the lecturers, I was keen to meet with the students on at least two occasions, ideally, the first prior to a practice placement and the second following such an experience. In this way the first interview could provide insight into experience of learning about research in the academic environment, while the second would allow me to explore any research opportunities they had witnessed while in practice. However, because the data collection was conducted on three sites, time constraints would not accommodate two individual interviews with the student participants, and so focus group interviews were used on the second occasion.

Another approach to interviewing that has been advocated in qualitative studies is the use of focus groups. While such an approach is not part of the phenomenographic tradition, Fielding (1994) suggests that group discussions offer insights into how people collaboratively make sense of a topic and may therefore provide perspectives on the context or culture in which beliefs are constructed. Focus groups are useful in investigating what participants think but they excel in uncovering why participants think as they do (Morgan, 1988). The technique involves the formation of small interview groups from a particular research population, which are moderated by the researcher.

The aim of the focus group interview is not to conduct several interviews simultaneously, but to encourage a genuine discussion of the topics of interest, allowing everyone to

contribute and respond to what others have said (Watts and Ebbutt, 1987). Additionally, they offer the potential for a large amount of interaction in a limited period of time. Kitzenger and Miller (1992) suggest that tapping into a variety of communications, provided by focus group discussions, is important because individuals' attitudes and perceptions are not entirely encapsulated in reasoned responses to direct questions.

Social psychological topics such as attitudes and cognitions may therefore be better suited to focus groups. The group effects will have an influence on the data produced and should be considered when interpreting responses. Morgan (1988) suggests that focus groups offer a trade-off between naturalism and access, as they offer an intermediate position between the naturalistic advantage of participant observation and the researcher control available within individual interviewing. While lacking the specific strengths of either approach, their flexibility may be their greatest strength.

The above studies indicated the feasibility of using this technique for the current study. Focus group interviews were conducted with each of the student groups, following the individual interviews and a period of time in the practice area. Khan and Manderson (1992) suggest that using this type of method with a pre-existing group will provide the researcher with insight into the social contexts within which ideas are formed. Thus the use of this method supplemented the individual interview data by offering indications of culturally held perceptions of factors that influenced the way in which the students learned about research in both the university and practice areas.

Content of interviews with the students

Interviews and focus group discussions were conducted with the students. Here I describe the individual interviews. Questions were kept as open-ended as possible in order to gain spontaneous information from the students. In the early stages of the interview the student was asked general questions about their programme and as the interview progressed more detailed descriptions were sought. Questions aimed at encouraging respondents to describe their experiences, but also explore underlying attitudes, beliefs and values (Fielding, 1994). A limited amount of control was essential to ensure continuity of the interview, however, I was also aware of the dangers of constraining expression through excessive control. Detailed information about the interview schedule is included in Appendix 5.

In summary, my aim in the interviews was to approach topics in a sequence that was appropriate to the emergent themes in the conversation with particular participants, without any rigid pre-specification of question form. Any careful pre-structuring on my part would have ignored the dialogic nature of the interview, reducing informants' control over how they defined the topic and possibly hindering their efforts to construct meaning.

A simple but important matter was to gain a description from the students of the subjects they had studied during their first year at university. This allowed me to consider how specific disciplines and departments they had encountered might have shaped their reactions. The topics listed in the interview schedules vary considerably in their scope. Some are very general and open ended in form, such as items which request students to

comment on their choice of institution, their reason for coming into nursing and why they chose a particular institution. It was important to gain a clear sense of all of these matters and, at the same time, these general, open-ended questions had the advantage of allowing students considerable scope to define and pursue their own individual concerns.

Although it was vital to obtain students' views on their experience of the research component of their programme, a teacher-dominated agenda for the interviews would have been inappropriate. To avoid this danger, the guide for the interview asked the students to talk about their expectations, beliefs about, and attitudes towards the research component of the programme. Students were given a very general invitation to talk about their likes and dislikes about the way in which the research curriculum was delivered. However, there were also very specific questions about the length of classes, the student numbers, content, notes provided, and any assessment that was required. Given that research had already indicated the size of classes as an issue in Project 2000, I also wanted to explore with the students whether they felt able to question staff in the classes or interact with other students.

Participants' perceptions of research will be influenced not simply by the subject of research itself but by the whole teaching-learning experience in which it is located. Taking these points into account, the interview guide was designed to ask questions that would allow me to gain a sense of how students saw the links between lectures, tutorials, assessments and practice. Another topic examined with the students was the way in which any difficulties with subject areas were tackled by them and by the teaching team. Asking for comment on preparation for examinations and assessments brought into focus

the ways in which the students actually tackled the task of learning. Students were also provided with an opportunity to describe what was a good or bad teaching and learning experience and they were encouraged to provide examples that would allow for exploration in more depth.

In addition to looking at how students saw the relationship between research and practice, the interviews also provided the chance to explore how school had prepared them for their current studies. The theme of relevant prior experience and their expectations of how the programme would proceed were continued in a question that asked the informants to describe how they found their first few months in university. It was anticipated that, by asking students to remember their experiences, it might encourage them to give contrasting then and now perspectives on their experience of research in the curriculum. (In practice this proved to be a useful tool as students often referred back to their experiences in the foundation section of the programme and could explain the differences in their views). There was also a more explicit attempt made to allow informants to give their perceptions of changes over time. Students were invited to talk through any changes in approach to learning that they had noticed over the years. More specifically, they were encouraged to focus on their experience of research in the foundation and branch sections of their programme.

The content of interviews with the teaching staff

As already indicated, staff interviews were less structured. The following paragraphs will describe how a core of topics featured in all the staff interviews; however, there was

greater variety in the matters covered within the teacher interviews than in those with the students. A copy of the staff interview schedule is available in Appendix 4.

There were a number of key matters which it seemed appropriate to pursue with all the teacher participants at first, and then a wider pool of issues which could be pursued according to the interest and experience of the individual and the time available. Another general consideration in the design of the teacher interviews was my own acknowledgement of my role in teaching research and the chance to share ideas and views on its development.

One key matter explored across all of the interviews was the teachers' perceptions of the major changes that had occurred as a consequence of the implementation of Project 2000 and the subsequent move to higher education institutions. Allowing for the reality and closeness of this change, it was recognised that the teacher group might be able to provide valuable historical perspectives on how the research component of the curricula had been implemented. As well as this general request for reflection on change over time, a quite specific question concerning perceptions of change was put to the teachers. They were asked whether they had found the change in the entry requirements, and the presence of more mature students in intakes, had had any effect on how they delivered their lecture material.

One important purpose of the interviews with staff members was the opportunity to explore aspects of good practice. Accordingly, staff members were asked to discuss any general strategies, or particular tactics they used in classes to increase student attention and participation. Despite the fact that it is often difficult for individuals to articulate their

understanding of their teaching methods, Chapter 7 will demonstrate that many of the respondents were able to identify to specific strategies they used in large lecture theatres. All the teachers were asked, in a very open-ended way, about when they felt satisfied and dissatisfied with the way in which the research curriculum was delivered. Chapter 7 will show that there was a remarkable uniformity in the way in which the teachers defined good and bad learning and teaching experiences and the circumstances which made this so.

When time and occasion in the conversation allowed, teachers were asked for their reactions to, and ways of dealing with, difficult students. As in the student interviews, there was an attempt to look at the relationship between the research component and other subjects within the curriculum. Finally, a topic discussed with all the staff informants was whether they felt that formal assessment of the research component would influence the students' understanding and knowledge of research.

Process of interviewing student informants

After some general introductory information and following the signing of consent forms, the students were informed about the general areas that would be addressed. I assured them that I would not make use of their comments and opinions in a way that would allow for them to be identified individually; and more generally would respect the confidentiality of the interview. I tried to be honest about my own interest in the subject area and acknowledged my own role as a university research lecturer.

The questions in the main were balanced in their approach. Once I began to talk through issues, two modes of questioning were adopted. At some points I actively encouraged the

students to speak, by back channeling responses, and other means, but making no contribution myself to the content. During such interactions the content of the interview, and the pace at which it was developed, were set, to a large extent, by the informants. At other times I took a more active role, making requests for clarification or more detail. To establish shared understanding within the interview, and to reduce problems with the analysis of the data at certain points throughout the interview, I sometimes paraphrased the discussion and presented the participant with my reading of what had been discussed for comment. Usually, I would preface these summaries with an explanation of why I was doing this in order to reassure the participant that it was their interpretation I wanted and that this was a means of checking my understanding of it. This strategy almost inevitably led participants to elaborate on the topic under discussion, making their meaning clearer. At some times in the interviews, there was much more active discussion while the student and I worked together to create an account of some feature of the research curriculum. This was particularly evident in the discussion on the way in which the research component was delivered in the first year of the programme.

Differences in the nature of interactions between interviews, which arose from experience, and the characteristics of speech of the informants ought to be recognised. Chapter 1 identified the way in which nurse education is structured, and stressed the importance of practice experience in shaping and developing student knowledge and skills. Accordingly, by the time they reach third year they will have had a fairly wide experience of practice areas. This variation in experience of research in the practice area is evident in the interview transcripts. It was not surprising that students who had not come across active researchers in practice contexts gave much shorter responses to

questions related to experience. However, a very important consequence of questioning about this type of experience was that it inevitably led to students explaining what they thought they needed in order to make full use of the practice areas in learning about research.

The majority of the interviews lasted an hour; however, there were a few which lasted longer. The closing sections of the interviews provided an opportunity for participants to comment on any aspects of the interview that they perceived as particularly relevant, or to ask any questions. The wording of this request varied from interview to interview.

Although it has been possible to describe a number of features of the interviews in some detail, it is much more difficult to provide any lifelike, reliable picture of the atmosphere of the interviews. Some interviews were livelier than others, a few involved serious, intense discussions, while others examined matters in a more lighthearted way. These elusive qualities of the personal style of individual informants can be noted, but are impossible to illustrate.

To summarise, this section of the chapter has set out to describe how I communicated my intentions in the interviews to informants and particular features of interview strategy, style and decisions. It is anticipated that this account will provide readers with information that will enable them to judge the trustworthiness of the way in which the interviews were conducted, and the extent to which I gave the students an opportunity to reflect on their experiences, and construct views on aspects of the research component of the Project 2000 programme of education.

Process of interviews with the lecturers

Rather than revisiting the similarities that existed between the conduct of the staff and student interviews, it seems more fitting to highlight points of contrast. As in the student interviews, teacher interviews were guided by the conscious intention not to be driven too much by my own research agenda. I acknowledged my own role as a research lecturer. The teacher interviews were in some ways less demanding that the student ones. Teachers were for a start more accustomed to providing an extended, coherent account of their thoughts and clearly did not require the degree of encouragement and assistance provided for some of the student participants. Staff required only minimal prompts to produce a lengthy response with interviews typically lasting up to an hour and a half. As teachers' responses increased in length, so often did the complexity of the account. Responses added finer meanings or introduced opposing themes. When a question or prompt of my own had successfully acted as a stimulus to a sustained flow of comment, it was important to show interest, but at the same time to stay firmly in the background. I attempted to stay in this role of involved listener; at times, however, there was a need to adopt a more active role and the transcripts show me working closely with some informants to make sense of what they are saying.

As with the student interviews, throughout the teacher interviews I paused to summarise the discussion and to seek the informant's response to my interpretation of events. Possibly, because we shared a similar goal, and to a certain extent were developing the same area, I found the teacher interview process intellectually less of a challenge than I did with the students who required more imagination and more attention to the detail of

their statements to establish common ground. There was also a concern with the students to get the interpersonal aspects of the interview right: to be tentative and exploratory in presenting interpretations of what was said, to avoid imposing on them my readings of their statements. With the teacher respondents, I was well aware that they would be able to challenge, and where necessary, politely correct, any misinterpretations.

Process of conducting the focus group.

Focus group interviews were conducted with each of the student groups, following the individual interviews and a period of time in the practice area. Khan and Manderson (1992) suggest that using this type of method with a pre-existing group will provide the researcher with insight into the social contexts within which ideas are formed. Thus the use of this method supplemented the individual interview data by offering indications of culturally held perceptions of factors which influence the way in which they learned. All the individual interviews with the students were conducted just prior to a period of practice experience.

Additionally, I also wanted the opportunity to check that I had a full understanding of what the students had been reporting and to give them a chance to correct or add to my understanding. In Chapter 4, it was stressed that this is not a common activity in phenomenographic research studies. However, I was not checking my interpretation or categorisation of the previous individual interview data, rather, I was using the opportunity of a second interview situation to ensure I had as clear an understanding of the participants' views as possible. The agenda for the focus groups was broad and although there were aspects of phenomenographic interviewing techniques used in terms

of focussing on specific learning experiences, these interviews were much more general than the individual interviews. After some introductory information and following the signing of the consent forms the students were informed about the general areas that would be addressed. As in the individual interviews, students were reassured that I would not make use of their comments and opinions in a way which would allow for them to be identified individually and that I would respect the confidentiality of the interview.

Unlike the individual interviews, focus groups are much more dynamic and discussion was encouraged between the students rather than my eliciting specific answers to questions. In asking questions I posed them in a very open-ended way that I hoped would not constrain the discussion within the group. While there was some opportunity for directing the conversation, I found the students to be much more responsive in the focus groups. Additionally, students were more confident in what they had to say and it was during the focus groups that specific bad experiences in learning about research came more to the fore.

Like the individual interviews there were occasions at the beginning of the group when I took a more active role in terms of getting the discussion started. I did find in one of the groups that I had to try and move the students on to a more positive area when one area of discussion became particularly heated. I again paraphrased the discussion and presented the students with my understanding of what had been discussed. This technique was used about 15 minutes before the end of the session, as it also allowed me to check that I had covered all aspects of the agenda. The students also took this opportunity to ask me questions in terms of my own research, and where possible and appropriate I tried to

answer their questions. Once the focus groups were concluded the tapes were transcribed in the same format as the individual interviews.

The processes of data analysis

This section of the chapter outlines the procedures used in transcribing, coding and analysing the data. In outline the procedure was as follows. The tape-recorded interviews were transcribed in full by the author, who then carried out the subsequent processes of coding and analysis. The early, more mechanical stages of analysis were supported through the use of a computer analysis package (NUD.IST), with the initial categories being gradually merged into broader ones using the tree structure provided by the programme. At that stage, it was necessary to introduce a more conceptual strategy.

The form of analysis, as in the strategy for interviewing, was influenced by phenomenography, but that approach could not be followed in total. The main thrust of that approach has been directed towards eliciting variations in students' understanding of scientific concepts and, as already explained has lost the contextualisation which was found in the earlier work at Gothenburg and in the subsequent research at Lancaster. In the present study the contexts and the specific content were crucial, and so categories and themes had to be identified in a rather different way. This part of the process of analysis becomes inevitably somewhat subjective, but it is guided by the research aims, by an understanding of the context within which teaching and learning takes place, and by the previous literature, but without being confined by pre-existing categorisations. The analytic procedure involves remaining alert to the subjective nature of the analysis by being aware of one's own role as analyst, and ensuring that the emerging category system

faithfully represents the comments made by respondents. As already argued, it is also crucial that the process is made transparent to other researchers, so that the thoroughness of the analysis can be judged.

The categories that emerged from the conceptual analysis were strongly influenced by the actual situations experienced by staff and students, and by the specific focus of the enquiry on teaching and learning research within a nursing curriculum. Some aspects of the coding then became self-evident as respondents talked about the common experiences of lectures, tutorials, assessment and placement, for example. But within this contextual framework, categories emerged which represented commonly mentioned aspects of the experiences, with main differences being discerned between staff and students, between college arrangements for teaching research, experiences of research at college and during placements, and between students at different stages in their course. Within these a further refinement of the categories indicated variations between individual views and experiences. Once the main categories were established, another researcher reviewed the categorisation in relation to the transcripts. She was familiar with grounded theory, but not with phenomenology, but found no difficulty in accepting the categorisation suggested, based on her own independent reading of the transcripts.

Once the main framework of the categories became clear these could be used for describing what had been said, for staff and students separately. In phenomenography, the final stage is to establish relationships between the categories of description established. Often this represents a logical structure or historical development of a specific concept. In the present study the equivalent procedures meant looking for

patterns of relationships linking the categories. This was carried out initially by considering similarities and differences in the contrasting groups and contexts used in identifying the categories. The final stage of the analysis then involved looking at the overall pattern of relationships and this was carried out by seeking parallels with the more general work on teaching and learning and the concept maps described in Chapter 3.

Overall, then, the aim was to carry out an analysis that was appropriate to the research questions and to my own perspective, rather than follow any one particular tradition. This involved reflexively acknowledging and identifying the effects of the literature, and my own perspective on the findings. Because of this inevitable subjectivity, both Guba and Lincoln (1989) and Mishler (1990) have emphasised the importance of transparency, which involves describing the effects of the research process on the findings, to allow the relevant research community to interpret those findings. One of the purposes of the detailed account of the analysis process and its underlying themes, provided in this chapter, is to give a transparent account. Of course, transparency can never be complete. It is not possible to describe every idea, discussion, or other influence, on the analysis. Nonetheless, an attempt has been made to provide an account that makes the central influences and stages in the analysis clear.

Whilst acknowledging a degree of subjectivity in the analysis, every effort was made to do justice to the data with extensive checks being made of the quality of the analysis as it proceeded. The intention was to address the research questions through a transparent account that fairly represented the participants' reports of their experiences, providing generalisations without losing uniqueness. The nature, bulk and complexity of qualitative

data have contributed to both theoretical and philosophical difficulties that arise around the issue of data analysis. Miles and Huberman (1994) have referred to the 'attractive nuisance' and 'splendors and miseries' of qualitative data. Qualitative analysis does not proceed in tidy stages, it is better seen as a flexible cyclical process (Tesh, 1991; Bryman and Burgess, 1994). The iteration and shifting between stages involved in such a process cannot be laid out in detail with any clarity. For this reason, the processes involved in developing each section of the findings have been set out separately and in a linear fashion. It is important to bear in mind, however, that the analysis actually involved interaction between these sections and in some cases cycled through the steps in the analysis several times.

Transcription of the data

Close listening and re-listening to individual sections of talk had the advantage of allowing me to become familiar with the individual respondent at an early stage in the analysis which in turn enabled me to understand more clearly the meaning of comments made. The transcripts were typed to make them compatible with NUD.IST and in a form that produced a text, which provided reminders of the ways in which the interviews were a product of an interaction. All the questions and responses were recorded and noted in a straightforward way. Having such a detailed transcription of the interview tapes proved of great value to me during the subsequent analysis.

The qualitative data analysis package

As mentioned, the earlier stages of analysis were carried out using NUD.IST that is, in essence, a data management tool that can make it easier for the researcher to work with a

large volume of qualitative data. NUD.IST does not carry out the analysis in the sense that quantitative packages do; the researcher still has to perform all the steps described, but using NUD.IST makes it easier to keep track of the data whilst doing so. The programme was designed principally for studies using grounded theory and allows users to organise their codes into tree-like structures, and is categorised as a theory-building programme (Russell and Gregory, 1993; Richards and Richards, 1994).

Little empirical evidence exists as to the usefulness of such programs in the analysis of qualitative data. Anecdotal evidence suggests that use of the package saves time and allows analysis to proceed more quickly (Burns and Grove, 1993; Russell and Gregory, 1993; Mason, 1996), that it provides efficient clerical assistance and is less cumbersome than a manual method of analysis (Holloway and Wheeler 1996; Baker 1998), and that it ensures a more thorough and accurate analysis, since no individual pieces of data can be lost or overlooked, and good analysis requires efficient management of data (Tesh, 1991; Benton, 1996; Holloway and Wheeler, 1996).

Yet, the use of computer packages to analyse qualitative data lays the researcher open to potential dangers and Russell and Gregory (1993) warn that novice researchers are particularly vulnerable to potential traps. Holloway and Wheeler (1996) cite Seidel (1990) who warns of the danger of analytic madness when using analysis software. This involves the researcher, particularly those with a quantitative mind set, being tempted to collect and manage large quantities of data, which results in a superficial analysis that lacks the depth and richness required of a qualitative study. It is further suggested (Seidel, 1990; Ely, 1991) that the relationship between the researcher and the programme can

become mechanistic, distancing the researcher from the data, and so resulting in a lack of the conceptual thinking required to reveal the meaning of the phenomenon. Cresswell (1998) has argued that NUD-IST may fix codes and categories, thus inhibiting the data analysis but that is also true of copying and pasting extracts under headings.

NUD.IST allows the researcher to create an index tree into which sections of text can be coded. The index tree is made up of nodes to which data can be added. The same data can then be put into a number of nodes. Each node has a title and a short description, and these can be changed at any time as the analysis progresses. Memos can also be added to the node in which comments or thoughts can be recorded. The nodes are typically arranged in a hierarchical tree structure, with initial nodes forming a root, to which 'child' nodes lead away from these 'parent' nodes. At any point in the analysis researchers can add or delete nodes and alter their titles, definitions and memos. Nodes can also be moved around the index tree, and can merge the content of two nodes. Successive versions of the analysis can be saved to keep track of the analysis process.

In this project, each interview was treated as a separate document. Each document had a header to hold a small amount of identifying information. Sub-headers were used to provide information on the site and the date on which interviews were conducted. Whenever part of a document is coded to a node, the appropriate header and sub-header are included automatically thereafter. Thus, a document can be displayed along with any relevant memos. Other functions of NUD.IST will be provided as they arise in the description of the analysis.

Forming categories of description

As already indicated, the process of analysis began with identifying relatively broad themes recorded within NUD.IST and then narrowed through a more conceptual analysis into categories. The first step in developing the themes was to work through the transcripts giving initial codes to parts of the data. The student interviews and focus groups were analysed as one group of data, and the lecturers' data as another. Each time an excerpt was found that seemed relevant to the research questions, it was coded in one or more nodes using the NUD.IST package. Initially, this involved creating a considerable number of new nodes to account for new aspects of the data. Later coding involved making additions to existing nodes. Once the initial coding had been carried out, the themes were developed further, into sub categories by working through a number of analytic processes several times. Firstly, the complete text coded to each node was read, focussing on whether all of the text coded at that node should be considered as part of a single category, or whether some of the text should be moved to another node. Notes were made within the node memos to reflect these developments, and node titles and definitions were altered as required. As the categories developed, decisions were made about how the nodes might relate to one another. This was represented by grouping nodes which all seemed to refer to the same wider topic under a parent node for that topic.

To refine categories of description further, the analysis explored whether all of the extracts in one node had a similar underlying meaning. For this, I considered the group of extracts together, and also referred back to the context of the individual and group interviews. Using NUD.IST facilitated this process, as it allowed me to call up the text

surrounding a given extract in the original interview or focus group. Refining the categories also involved considering the relationships between them. I therefore focused on exploring the central features of each category, and what distinguished it from others. Defining the categories sometimes involved identifying qualitatively different levels of experience, both between and within individuals. These levels were considered in terms of complexity, sophistication, and inclusiveness, in a way similar to the development of logical hierarchies in phenomenographic research (Marton and Booth, 1997).

Categories of description refer to clearly defined categories that, in the analysis, delimit qualitatively different aspect of students' and teachers' reports of their experiences, perceptions, and ideas. To a degree, the interview schedules provided some guidance on areas of analysis. However, in reading a transcript, I would always have questions in the back of my mind. For example, when reading the student transcripts, this was "What does this tell me about the way the student understands research?" In other words, what does research mean to this student if he or she is describing it in this way? When comparing transcripts I asked myself questions such as "Are these two lecturers seeing research in a similar way?" or "are there significant differences between their understanding"? I questioned why I thought participant reports were similar or different. There is a tendency during this process to just want to describe the things the participant says and then to group them according to the things that are said in common. In fact, categories of description do reflect some similarities and differences of this kind. However, on reflection, my experience is that these are consequences, not elements of the categorisation. Participants often say similar things to each other but their underlying meaning can be different or they may express similar ideas in quite different terms.

In developing such analyses, there are always individual judgements involved in deciding the precise boundaries of the categories, and in selecting the level of description. To describe fully every relevant aspect of the students' learning or the teachers' teaching, it would be necessary to have a large number of very specific categories. However, such an analysis would not be helpful in terms of providing a broader structure on which to base further analysis. On the other hand, categories that were too general would become distant from students' actual way of learning. In making such decisions, my aim was to arrive at categories that would help to provide a clearer understanding of students' developing knowledge of research. This meant that the outcome of the category was one distinct picture of the student's learning, although it is accepted that other pictures could have been drawn from the same data. A similar approach was adopted for the teacher data and the similarity in the perceptions of the contexts and teaching arrangements was used to create potential links between staff and student data for later comparison.

I was fully aware that, as a teacher myself involved in the development and delivery of the research curriculum, I am too much of a 'native' to look at the comments of other teachers with a wholly impartial eye. There are of course distinct limitations to reflexivity and it is possible that another researcher with a different background with a more detached perspective may have focussed on features of informants' accounts that as an insider I took for granted. However, the advantage of being an insider was in having a greater store of background knowledge and experience of developing and teaching research to inform the interpretation of findings. I was fully aware of the two worlds I inhabited, as a researcher, and a teacher and kept that fully in mind in interpreting the

comments in relation to the contrasting contexts.

Throughout these processes concepts from the literature were revisited. This involved considering how the categories resembled, and how they differed from, those found in previous research. The aim was to develop categories that described the students' experience of learning about research or aspects of the learning environment that might influence their approaches to learning. The same aim applied to the teacher data in relation to their approaches to teaching, the constraints of the curriculum and the learning environment. However, this does not mean that only aspects of teaching and learning described in the literature were identified. For example, categories which seemed to be conceptually related to the approaches to teaching, but which were not identified in the literature, were included in the analysis. Further, no category was included in the analysis unless it was clearly represented in the student and teacher data. So, the analysis was linked to previous research findings, but was not constrained by them.

After a lengthy process involving repeated reading of each student's interviews, coding sheets were completed which summarised the comments made by each student. During this part of the analysis, possible modifications to the category scheme were considered, and some changes were made to accommodate aspects of the data that had been missed in earlier stages of the analysis.

Evaluating the quality of the analysis

Part of the process of transparency and reflexivity depends on a continuing alertness to sources of potential error in carrying out the analysis. As already indicated, terms such as reliability and validity have been developed for use in quantitative analysis and are not

directly applicable to qualitative studies. Nevertheless, there are standards to meet the requirements for what Cronbach and Suppes (1969) helpfully described as disciplined enquiry. Qualitative researchers have to make sure that the analysis is thorough and transparent (which is equivalent to reliability). They also have to check carefully that the categorisation and its explication through description and quotes from the transcripts faithfully represents the data and represents a recognisable reality (Parlett and Hamilton, 1977 p.12) for the participants or others who have had similar experiences (validity).

The earlier descriptions have indicated the steps taken to ensure that the analysis and categorisation was thorough, and by explaining each step carefully the methodology has been made transparent. Overall, a range of levels of analysis used into this study made it possible to give a thorough account of students' and teachers' experiences of the research component of the program. Analysis was carried out at a group level. Development was charted across categories, within categories, and independently of categories. It was therefore possible to state with some confidence that all of the examples of experience given in the interviews were included in the analysis and that the main influences on those experiences were explored in considerable detail.

Validity is maintained, in part, by having other researchers check the analysis (Guba and Lincoln, 1989; Entwistle, 1997; Creswell, 1998). An additional important criterion in evaluating the analysis is the extent to which it represents the complexity contained in the original data, while Glaser (1978) also emphasises the importance of preserving the uniqueness of individuals and of remaining faithful to the core of participants' experience. Checks on this part of the process were carried out in the early stages of

categorisation by the main supervisor being involved in discussing and evaluating the categories. Once the overall framework was completed, a further check, as already mentioned, was made by an independent researcher. Additional support for validity was derived from the clear links to existing literature. This fits with Hammersley's (1990) suggestion that the validity of the findings is judged in part by their plausibility in relation to existing knowledge (Hammerersley, 1990; 1992), with an additional check on its 'recognisable reality' being achieved by presenting the emerging findings at two international conferences and to student groups. The findings made sense to both nurse teachers and students.

Presentation of the outcomes of the analysis

As already explained, one of the main comparisons in the analysis was between the perceptions of staff and students on the teaching and learning of research within the nursing curriculum. In the next two chapters the final categories related to both the teacher and student data are presented and discussed. Chapter 6 provides an account of the students' experiences of learning in general, combined with potential explanations for differences between students at different stages in their course. Secondly, and more specifically, an account of the students' experiences of learning about research was explored through their accounts of classroom and individual learning, assessment and teaching experiences. This involved exploring how best the variation in students' thinking about learning research could be described, and the integration of these descriptions with the previous literature on learning.

Chapter 7 then presents an account of the lecturers' experiences, firstly by describing the

lecturers' perceptions of the changes in nurse education, as this had a direct bearing on how they managed their role. Then, their perceptions of teaching and learning practices in both general and research situations are presented.

Finally, Chapter 8 summarises the main findings and relates them to the previous literature in exploring their meaning in the context of nursing education. Then the inter-relationships between the categories is shown through a conceptual model which represents a conceptual integration of the findings that indicates the contribution made by the thesis to theory building in this research area. The practical importance of the study is explained in relation to the current situation, leading to implications for developments in the teaching and learning of research within the nursing curriculum. Finally, suggestions for further research and development are made.

Chapter 6

Students Attitudes and Experiences of Learning About Research

Introduction

This chapter presents the categories that emerged from the analysis of the interviews, which focussed on students' perceptions of the learning environment and the effect this had on the development of their research knowledge in both the Common Foundation Programme (CFP) and the branch section of their studies. To recap, the students' experience of the Project 2000 Programme consisted of 18 months of the CFP followed by 18 months in a selected branch specialty. In the first 18 months of the Programme, students from all branches were together for theoretical input. Once the students reached the Branch section of the Programme, they were split into specialist groups and received theory relevant to their own discipline. All the student participants were from the mental health branch of the Programme. By way of introduction to the interviews students were asked to provide background information on the way in which they entered nurse education (educational qualifications) and why they had chosen to complete mental health as opposed to other branch selections. Of the twenty-two students interviewed, six had experience of previous study that ranged from an HNC in Social Care to an MA in English. Seven of the students went from school to university and the remainder was made up of mature students, some that had completed an access to nursing course and others who had chosen to come into nursing as a second career. As might be expected, those students who had experience of working in the health care system had opted for

mental health because of their experience, as the following quote from Emma, a mature student illustrates.

I worked on the bank and had the opportunity to work on some of the acute psychiatric wards, and I thought this is great; this is what I want to do. I was really interested even though I was just an auxiliary. I knew this was the right choice for me.

Students with higher academic level qualifications tended to have more personal reasons for choosing mental health nursing or had started the Programme; two of this group chose mental health because they had friends or family who had experienced mental disorders. Alternatively, three had changed to mental health following practice experience as the following quote from Margaret illustrates.

I actually chose adult nursing, and it was not until I did my mental health placement, in CFP, and I felt speaking to other students and staff who were there that there were a lot of other aspects that were part of the branch programme apart from just learning about mental health illnesses themselves. There was a lot you could learn about self-awareness. I felt there was a lot you could learn about yourself in more depth, so that influenced my decision to change.

Students' existing knowledge and expectations about nursing

In the early part of the interviews, students were also asked about their expectations and preparation of the Project 2000 programme prior to starting, and to what extent these expectations had been fulfilled. One issue concerned the amount of time spent in the university prior to going out to the practice areas. All students expressed frustration at the amount of time spent on theory in the first six months of the programme. Students had expected to have experience in the practice area from very early on in the programme. For Joan, who had come into nursing directly from school, the expectations of being able to apply her learning in the practice area was not possible in the first six months.

It was not at all what I expected. The first six months were all in college, and I expected to be in the wards, at least for some of that time. I did not think there would be so much

theory to it. It seemed to go on and on and I was not able to apply it to anything because I had no experience of being on the wards or looking after patients in hospital settings.

There was a general consensus from all the students that the first six months of the Programme were too theory laden and, for most, there was confusion as to why they were doing so many different subjects. Many of the students felt overwhelmed by the amount of information delivered. Amanda who had already completed a degree prior to coming into nurse education comments on her feelings about this section of the Programme.

If someone had told me beforehand what the course was really going to entail I would not have come in. The first six months were really college based and there was so much information just thrown at me I felt really overwhelmed.

A number of evaluations that have been conducted on Project 2000 identify the common foundation section of the programme as the most difficult time for the students (Bradby and Soothill, 1993, Jowett *et al.*, 1994, May *et al.*, 1997). Subject matter covered in this section also caused some concern to the students, many of whom felt that the subjects were not presented in a sufficiently logical order and were difficult to relate without sufficient background and contextual information. Students were frustrated by the lack of time spent on what it was to be a nurse, or how they could use this information to care for sick patients. Many of the interviews on this area were quite emotionally charged as the following quotation from Jane demonstrates

I thought, "what have these subjects got to do with nursing". In my first six months I found it really quite hard, because it was all theory. You were not really getting out there to do the practice. I thought "I can't wait to get out of here to put this information into practice".

Students wanted to feel they were on a nursing course, and to have input which related directly to working with patients. They felt that a lot of this background material was not relevant to their stage of learning. Peter, who had completed a degree programme prior to

coming into nurse education, found this stage boring and felt that much of the information was not appropriate for him.

I found it really boring to go into all that background information on health authorities, research and management structure. Because, in actual fact, that really goes to the back of your mind. You want to know you are on a nursing course; you want to focus on the needs of the patient rather than the background.

The above accounts highlight the frustrations students experienced at much of the content of the common foundation programme. More distressing was the way in which this content was delivered. In all these contexts this caused much anxiety and distress. The size of the class was viewed as of considerable importance for the quality of the learning experience and determining willingness to take part in the proceedings. There was a strong consensus of opinion that learning was more active when groups were smaller. The next section illustrates general perceptions of the teaching while later ones concentrate on the teaching of research, specifically.

Students' perceptions/experience of the academic teaching-learning environment

Large classes

Lecturing is the most frequently used strategy for the education of large groups of students. The lecture is dependent upon a deductive attitude, with the teacher defining concepts, illustrating them with examples, unfolding the implications, and finally linking this new material to previous input. The majority of the classes in the CFP were held in large lecture theatres holding up to 150 students at any one time. It is suggested by a number of authors that, in lectures, students are less able to direct their own learning or to

think critically, and that such an approach to teaching merely prepares students to be passive members of a homogenous group (Friere, 1970; Gott, 1982).

Further it is argued that lecturing techniques promote dependence on the information and facts from the lecturer's notes, traveling through the students' head and into their note book, without interpretation or integration (Jarvis, 1983; Davies, 1990). In their evaluation of Project 2000 in Scotland, May *et al.,* (1997) identified lectures as uncomfortable and difficult learning experiences for students. Similarly, in this study, all students reported classes in the lecture theatre as uncomfortable and at times intimidating as Eileen a student who accessed nursing directly from school explains.

I just found that you did not really have a voice. If the tutors were asking you something, it was far more intimidating to speak up for yourself in front of 60-80 odd people, and I did not always feel like, if you have a problem in the class it was not like at school, when you could go up and see the teacher after the class, and she would go over it with you. I thought I could not do that because she had 80 of us, who could all do that. I tended to do it on my own.

The above quote suggests that some students may need to make a considerable adjustment to their values and perspective on life if they are to act in accordance with the norms of co-operation that prevails in university large group settings. Younger students entering nursing at university may need to learn new discussion skills and a different view on how they ought to act in large teaching groups. It highlights the fact that for some students learning to cope with academic tasks such as participation in large group discussion may require a distinct change in how they view their own role as a learner.

Students need to absorb and act by a new set of cultural expectations, which demand that they show more initiative and take more responsibility for their learning. At the same time there may be a corresponding change in the way they think about the teacher. There

has been a large increase in student numbers in UK universities in recent years with a corresponding decrease in the amount of contact time that lecturers can give to individual students. This situation brings with it clear dangers that some students may feel isolated, or even alienated, from the general life of the university. Many may, like Eileen, choose to go it alone rather than seek advice.

Fears and anxieties

A number of the students admitted that they felt considerable anxiety in the large group settings. For some the possibility of being asked a question in front of 80-100 peers provoked acute anxiety. Knowing people was also a central feature. The need to be guarded, particularly in a social situation where you have few acquaintances among the other participants, also features clearly in the following recollection from Amanda.

Sometimes it was hard to concentrate with so many people in the class, and so many things going on. A lot of people felt intimidated by the size of the group, and would not speak up or answer the lecturer when they asked a question. I did not know a lot of the other students and that often stopped me from participating in the discussion.

Concerns about a possible public loss of face were very salient in the interviews when discussion was centered on the lecture theatre. These concerns were very often closely linked with an expressed sense of self as being less capable of making an effective contribution to discussion than others. The powerfully inhibiting effect on participation of the belief that one was less clever than fellow students, were presented clearly in the accounts that some students gave of their actions in large classes in the lecture theatre. Concerns of this type featured strongly in the following extract. The extract from Jane also points out how participation may vary across lectures depending on how the

knowledge, abilities and personalities of the other participants are viewed in comparison to self.

I often hold back what I am going to say in research classes, and somebody else will say it and I will think, "well I was going to say that, so we must have been thinking the same sort of thing". I often wait until somebody else says it, you know in case I am wrong and in front of all those people I would feel stupid.

Implicit in the above comment is how the students compared their own abilities and knowledge favourably or unfavourably to those of their peers, with the belief that certain students played a large part in lectures because they were well informed and/or clever. The rest of the group viewed certain students as the ones to watch to check their own understanding in a 'safe' manner.

Teaching style

A common theme in the recollections that students gave of their early experience of large group teaching was the importance that they attributed to the lecturers' social manner and teaching style. Lecturers were reported as either allaying or increasing anxiety, depending on their personal style of teaching. In the students' accounts 'good lecturers' were characterised, in part, by their possession of knowledge and enthusiasm for their subject and their relaxed informal manner. Accounts of unsatisfactory lectures were marked by reference to social distance, lack of knowledge and inability to answer student's questions. While lecturers who displayed a personal interest in students and acted to minimise social distance were looked on with favour by the students, strong negative opinions were expressed against lecturers who overtly displayed their power, thereby highlighting the asymmetry in position between themselves and the students. For example, students appreciated the chance to seek clarification or to feel comfortable with

asking questions. Below is an example of a teaching style that was appreciated by Susan, a student who was a direct entrant to nurse education from school.

I liked the teacher; she was easy to talk to and was not bothered if you asked questions. Those sessions always seemed to go quicker.

The belief that lecturers should exercise restraint in using their power to control the flow of discussion or questioning was a common one across informants. Disfavour was expressed towards lecturers who were perceived to exercise too tight a control over content and discussion in classroom study. A number of students also gave fairly vivid accounts of specific 'bad experiences' at the hands of lecturers in the large group sessions. The quote below from John describes how these experiences inhibited participation in later lectures run by the same lecturer.

There were times when I just wanted to stop her and ask a question but you knew this was not encouraged and at times you were made to feel as if you were a troublemaker for asking questions. Eventually I stopped asking questions in her class.

Many students did not draw the contrast between what they viewed as satisfactory and unsatisfactory performances in quite as sharp and as explicit a manner as in the preceding quotation. However, analysis of all the student interviews reveals a clear standard of judgement. In the accounts the students gave of how they believed lecturers ought to act and of the disappointments of the behaviour of a particular lecturer, a general expectation could be discerned on the part of the students that lecturers would perform their role in an authentic, engaged manner.

Research by Entwistle and Ramsden (1983) discussed previously in the literature review, identified various situational factors such as the quality of teaching, the teacher's commitment to teaching, and attitudes of the teacher and their relationship with the

students that may influence the student's adoption of a deep approach to learning. In this study, teachers who were unable to answer questions, or who were perceived by the students as not being knowledgeable or enthusiastic about their subject area, were seen as responsible for the lack of interest in their discipline. The following quotation from Peter regarding the research component of his programme demonstrates this point.

I think the person teaching us did not teach it very well. It was not made interesting enough so that you wanted to know more about it, it just seemed a chore. It was just something we had to do, it was just thrown in and we had to do it. It never gripped me at all.

Another common complaint was against lecturers who spoke too much or who presented too much information at once. This was viewed as a waste of time as students spent most of their time trying to take notes. Most of the students found they could not concentrate on listening because they were so busy taking notes. Some lectures involved the use of a great deal of overhead material, but students were not provided with notes and so tried to keep their own notes of the class. Lorna describes her experience

The endless overheads, you know, it gets a bit monotonous when you have just got a lecturer just standing and putting up overheads and you have got to watch the smoke coming off your pen trying to get it down before they put away the overhead and put down another one.

Peer behaviour

Although students revealed that they saw the lecturer's actions as the key determinant to the success or failure of a lecture, they also viewed themselves as bearing some responsibility for the success of the learning experience that was achieved. There was recognition of the importance of students themselves investing effort in the classes and the creation of a good atmosphere. A number of the students were frustrated by the behaviour of their peers in the large classes. There was annoyance at not being able to get

the work done because other students were disruptive, or because of where they had to sit in the lecture theatre. Jane provides a description of such a situation.

It was such a big class, and there were so many groups, I mean there was maybe about 100 people in the lecture theatre, and some people would carry on and you were not getting the work done... I would not say it was the best teaching facility, there are too many people, its too warm, people are fidgeting, some people are talking. It's not really a good way of learning. Sometimes you would have a full day in the lecture theatre that was pure hell.

Some students came up with ways of dealing with the problems of the large group. When students wanted to actively engage with what was going on they came up with tactics that assisted them in dealing with the environment. Sinead explains how she coped with large group lectures.

After about two or three months of sitting at the back I started to try and get in early, so I could get a seat near the middle of the lecture theatre. A whole group of us sussed it out, and realised this was the best place to hear the lecture, and to be part of what was going on.

Students' experience of and approaches to studying the research component

Although the literature analytically separates perceptions of teaching and approaches to studying, in this study students tended to address both in their comments. Attempts to separate them in the analysis resulted in a less coherent account of the students thinking. Consequently, in this section these views are presented together.

Research in the Common Foundation Programme

Having looked at some of the more general concerns in the Common Foundation Programme we move on now to focus on the research component. Within the findings of the study there was a strong negative consensus among the participants regarding the way in which the research content was delivered. Examination of the three curricular

documents indicated a mean of 20 hours input allocated to research during this period of the programme. From the module descriptors, the content demonstrated strong emphasis on theory-laden classes with an emphasis on teaching students about 'proposing to do' research rather than 'how to use it (Parahoo, 1998). The frustration students' felt at having to learn subjects that were not directly related to patient care has already been reported. Many of the students felt that the research component was introduced too soon and they were not ready for this information. The lack of clinical experience in the first six months of the programme compounded this problem, as students could not relate this theory to practice. Students expressed their frustration at having to learn this subject when there was so much more they needed to learn about nursing. Very often, in the interviews, the students used words that gave them a personal distance from the concerns or reported on behalf of the group rather than just their own perspective. Such activity is evident in the following quote from Margaret.

I felt at the early stage the subject (research) was totally irrelevant; there was just so much else going on that seemed to do with nursing and this seemed alien. And I think there was a consensus among the class at the time as to what this was all about. How on earth were we going to be able to use this? We wanted to know why they were not teaching us something useful, like how to measure a blood sugar, something that the class felt would be useful when we went on the ward.

Such views are not uncommon as research suggests students on the diploma programme experience stress when in the clinical area, due to a perceived lack of relevant clinical skills (White *et al.*, 1994). Students, in the MacLeod-Clark *et al.*, (1996) study of diplomates' perceptions of the philosophy and practice of nursing identified a perceived lack of practical skill as a shortcoming of the diploma programme. Similar concerns are evident in a study carried out by White *et al.*, (1994) on the outcomes of the pre-registration nurse education programmes. Additionally, criticism has been voiced by

clinical staff regarding the lack of clinical exposure of students during the CFP (Robinson, 1992). There was some variation in the level of dislike for the research component in the CFP, most of which related to confusion as to why the subject was introduced when it was. However, as the following quotation from Amanda will demonstrate, for some of the students it was perceived as a chore, nearly to the extent of a punishment, and this led to resentment towards teaching staff who were perceived as the cause of this discomfort

Och, I hated every minute of it you know. Why they put us through it I don't know.

It was somewhat surprising that Amanda had already completed a degree programme, yet still felt so strongly about the research component. When asked to say more on this particular comment she explained that she 'wanted to learn about nursing' and that if she had wanted to learn about research she would have opted to study that subject in more detail. It would be wrong to give the impression that all students had such a strong opinion, but a review of all of the transcripts highlights a certain degree of frustration with the delivery of the research component in the CFP and it is to this we now turn.

Delivery of the research component in CFP

As already mentioned most of the classes in the CFP were delivered in a lecture theatre, using a large number of overheads and providing a high degree of factual information. Earlier in this chapter both the discomfort of the environment and the degree of anxiety this caused the students were discussed. Students reported that the research classes were lectures for about 40 minutes followed by group work. There is some evidence (Kramer *et al.*, 1981a) to suggest that small group work is effective in teaching research at both graduate and undergraduate level. However, the effectiveness of small group work is

dependent upon the prior knowledge of the group to carry out the work, and on the amount of support offered by the teacher or facilitator. Students were often given a research article and a list of questions to address as a group. Many of the students found reading the articles very difficult, were often unable to understand sections, had problems with the terminology, and could not relate to the statistical analysis presented. Students then reconvened into a large group to feed back on the activity. The following quotations from George and Amanda in one of the focus groups highlights how difficult some of the students found this activity and how they coped with having to feed back in front of their peers.

A lot of the problem was the words used they were so hard to understand. I read it because we had to go over it in class and I kind of just sat back and listened to everybody else and what they made of it.

It was the words they used they were so hard to understand. I just ignored the ones I did not understand (which was most) and tried to make sense of the rest.

The terminology in the above quotes above is worthy of some further exploration. George read the research article because he 'had to' not because it was his personal preference to do so. His motivation was driven by a sense of duty rather than an interest in the subject per se. Amanda (who has already been quoted as 'hating' the research classes) chose to take more control of the situation and work with what she could whilst ignoring the rest. There is a sense in these quotes and in a number of the other student interviews of 'just going through the motions' to meet the approval of the teacher rather than being involved in a learning situation which promoted understanding.

Several studies have identified research terminology (Champion and Leech, 1989; Clarke, 1994; Lacey, 1994; Parahoo, 1998; Rogers, 2000) as a key factor for lack of

interest and non-utilization of research findings. During the interviews students were asked to provide more detail on their understanding of research terms. Throughout the discussion, students would recall terms used in the research classes, however, when asked to provide more detail on the meaning of those terms, the students openly discussed their confusion. This is of some concern, given that the groups were third year students recollecting on first year experiences. The quote below from Agnes who had entered nursing directly from school provides some insight into the level of knowledge reached by the students at this stage.

I know there are quantitative and qualitative approaches to research, but I often get confused about which one is which.

Here, a third year student who had completed a research critique as part of her second year assignment remains confused about the difference between quantitative and qualitative approaches to research. However, on further discussion, and with some probing from me, Agnes was able to describe quantitative research in terms of research design, for example, she understood that surveys and experiments were quantitative in nature and that the data were presented in numbers. Her understanding of qualitative research was at a similar descriptive level. She was aware that qualitative research involved using interviews, and that it provided much more detail of the area being investigated, however, she was unable to provide much more detail in terms of the types of research designs involved. Further issues related to understanding are covered later in this chapter when we address the research assessment.

Agnes was not alone in terms of the level of understanding. Throughout the transcripts there were similar descriptions offered by the students. It would appear that students had

grasped the terminology but their level of understanding or explanation remained limited. In the extract below, George describes his understanding of qualitative research. Prior to this quote, George had claimed that 'grounded theory was a bit of a 'mind bender' and phenomenology, as 'even more so'. When asked to explain this further he added

Grounded Theory was a bit complex and multi-layered, but phenomenology was so abstract it would take a lot of getting used to.

Despite prompting, George was unable to explain his understanding any further. However, he was aware that he needed to learn more about research and, as we will see later in this chapter, saw this as a part of his post-registration experience. The quote from Susan, below, describes well where the students see themselves in terms of their research knowledge. It is worth noting here that this theme of 'research is for later in my nursing career' was constant throughout the interviews and will be revisited later in this and the discussion chapter.

You have to understand the terminology before you can make head or tail of research. I don't think there is any easy way; you just have to persevere and at times I felt like I knew the words, but I could not explain them. I only knew these words were related to research, but I did not know any more about them. I should know but I am not there yet.

The language of research can be perceived as confusing, and nurses often do not read research-based literature because they claim the language is 'off putting'. As a consequence they do not know about research outcomes (Barnett, 1981; Hunt, 1981). However, as McIntosh (1995) pointed out, even if nurses do read research reports, they may well be presented with a bewildering array of research findings, some of which may be contradictory. One area of understanding, which caused particular distress to the students, was statistics and it is to this we now turn.

The statistical aspects of research were introduced to the students near the end of the CFP. In the review of the curricular documents it was clear that each semester introduced another aspect of research. However, little time was available to check out student understanding of previous input. For the students who had competing priorities in terms of their learning, it was often difficult to remember what aspects had been covered in the previous semesters and how they might connect this new material to the previous input. Claire explains

Research. I can never remember from one semester to another what we have covered. It is no good doing this in Foundation Studies we have too many other subjects that we are trying to grasp.

Students expressed a particular dislike for the statistical aspects of research. They found the language confusing and the way in which data were displayed in tabular format caused much confusion. Susan explains

It was all double-Dutch sometimes; like in the way things are put in tables. Some of those tables are meant to be quite simple, but sometimes you look at them and think, "Where did it all come from?" especially when you have got an article, and they have got it written out, and they have got a table to show the results, and you are trying to understand what it all means.

Nursing students are not alone in their perceptions of the difficulty in understanding research methodology and statistics. Studies have demonstrated that many students in social science statistics classes (Lehtinen and Rui, 1995; Rautopuru, 2000; Murtonen, 2000; Murtonen and Titterton, 2000) find the experience both difficult and anxiety provoking. Introductory statistics courses also involve many abstract concepts, such as 'random variables' and 'probability', while statistical problems may be open to different interpretations, and even have several possible solutions (Rautopuru, 2000). In research related to statistics, studies have been conducted in two main areas, lack of understanding

of the concepts they have studied (Garfield and Ahlgren, 1988; Lajoie *et al.*, 1995), and anxiety experienced by the student (Pretorius and Norman, 1992; Forte, 1995; Townsend *et al.*, 1998).

Other difficulties identified relate to the sequence of delivery of the research curriculum. In the majority of undergraduate programmes, the research input tends to be divided into specific sections, with the input on statistical data and analysis being taught as components separate from the remainder of the research content. A study about the sequence of research input to groups of student nurses was conducted by Stranahan (1995) who found the sequence and place of methodological and statistical courses highly significant in relation to student understanding. Students who undertook methods and statistical input concurrently had a significantly higher grade at the end of the course than those students who took the modules consecutively. The findings of this study did not support any advantage of statistical input being delivered first, despite the fact that this sequence is used in the majority of undergraduate nursing curricula.

Studies have shown consistently that nurses lack proficiency with mathematical calculations (Bath and Blais, 1993; Cooper, 1995; Kapborg, 1993). Indeed, Pozehl (1996) has suggested that it is significantly poorer than that of other similar students. The following quotes from Susan and Jane highlight the views of the participants in relation to statistics.

I have great difficulty in understanding figures. A lot of the group admitted that these figures used to put us off.

I see the relevance of statistics and correlations, but numbers just make me itch and the language is pretty boring.

Susan admits to her own problem in not being able to understand statistics, however, she also speaks for the rest of the group in terms of how they found the statistical input. Jane is similar in her views; however, she sees the relevance of statistics but at the same time describes nearly physiological symptoms of an allergic reaction to having to work with them. Further on in the interview with Jane, she explained the problems that all the students expressed when they had to read a quantitative research article in the CFP and the way in which, as a group, they dealt with that problem.

A lot of us admitted that we did not understand statistics, and we agreed just to forget that section. I know now it is an important section, but I still have problems understanding it.

Here Jane on recollecting on her experience in CFP acknowledges that she has changed her views on the value of statistics, however, she also highlights a major problem in terms of understanding the research articles read during this period. If students are ignoring the statistical analysis section, then they are accepting that what the researcher puts in the discussion is right. Such views were also evident in the students who had completed a research critique as part of their research assignment in the branch section of the Programme.

Yet further on in the interview with Jane, I asked how the teaching staff dealt with the lack of feedback in relation to the statistical aspects of the articles addressed. She explained that, in the majority of cases, feedback was accepted as it was given and no further questions were asked about statistics. However, she recalled one particular lecturer who did question the groups about this, but little response was evident from the student group. By accepting the figures presented in research reports as accurate, it could be debated that the students' assignment was not a critique, but rather a descriptive

account of the article selected. Attitudes towards mathematics have been shown to affect performance (Flynn and Moore, 1990; Pozehl, 1996). It is therefore essential that students' perceptions of their own abilities, the issues they feel influence that ability, and the adequacy of the teaching input they have received, be addressed.

The students were clear in their views that research was introduced too early in the programme, and that this had an adverse effect on how they perceived it. They stressed that they had come into the Programme to learn about being a nurse, and that while research, and a number of other related subjects, may be seen to be relevant by the teaching staff, the students were really interested in experiences which were going to prepare them directly for their role as a student nurse in the practice area. Research was thus seen as not relevant to their current learning needs. Below, both Theresa and Peter explain that they had other priorities and how they ranked their understanding of research.

I don't think I am quite ready for research yet. I feel that there is a lot more that I feel is more pertinent to learn just now and I just can't take everything on board. Information on research just goes to the bottom of the pile.

Research! That's for later when I am a staff nurse and I know what I am doing.

Moving to Branch

In line with other research studies of Project 2000 (Jowett *et al.*, 1994; May *et al.*, 1997), students in this study felt relief when they moved to their chosen branch section with one student describing it as a 'blessed relief'. The increase in confidence over time was explained by the move from Common Foundation Programme to the branch programme. All the student participants noted that, as they left the Common Foundation Programme

they got to know each other very well and that this acquaintance led to a different quality of social atmosphere and of interaction within the group. A contrast was sometimes drawn between the learning and teaching activity in foundation studies and that of the branch programme. When the members knew each other quite well they felt quite relaxed, while in the Common Foundation Programme they sat with strange people around them and felt quite anxious.

In addition to students feeling more at ease in the group where they knew the other members, some of the participants attempted to articulate the existence of a different form of interaction. A few informants also commented on how they had gained subject knowledge and experience over the years, and how this influenced the quality of the interaction with their peers and the teaching team.

Doing the research assignment

Personal interest, or lack of interest, in a particular topic within the overall content of the Programme, was described by most of the student informants as a very important influence on how they prepared, took part or completed assignments. While all three of the sites required students to include research findings in their assignments, only two of the Colleges had a specific research assignment, which took the form of a research critique and was completed in the branch stage of the programme. Students reported high levels of frustration about the lack of choice in relation to the research article to be critiqued. Janis explains

It was just terrible. You were given two articles and you had to pick one and use the question sheet to critique the article. I don't know how I passed I had no real understanding of what I was doing. You just answered what you could and hoped for the best.

The way in which the students read the research articles was of particular interest. As already highlighted, the terminology and the statistical aspects of the research articles were often perceived by the students as barriers to their understanding. However, they knew they still had to try and make use of some of the material in the article and came up with ways of using the summary or the abstract to get an overview of the article. They openly admitted they just ignored the sections they did not understand. Indeed, in some cases the abstract was the only section the students read. Below are two examples from Leigh and George that highlight this activity.

I would pick the easier articles. I read the ones I can understand, and with some of the others I read certain sections, like the abstract and the introduction. But I don't look at the numbers section, because it makes no sense to me, so I just go to the conclusion.

I would read through it first, and then go back with a highlighter and highlight the bits that stuck out for me. And then I would maybe go back and read it again, and think there was something else, which was relevant that I could use. The bits I did not understand I just missed them out.

If students are going to be assessed on their reproduction of material in assignments, they tend not to adopt the approaches to study that develop higher order cognitive skills. The strong impact which assessment methods have on the direction and focus of student learning has already been highlighted in Chapter 3 of the literature review. This relationship highlights the necessity for matching assessment with desired outcomes. The example above shows how this particular assessment undermined the opportunity for the students to adopt a transformational approach to their learning. Here we see students using a surface approach to learning by identifying aspects which were familiar but ignoring the areas that were challenging. Although the students were going through the

motions of quoting research findings, they were still having great difficulty in understanding certain sections of the literature. Rather than demonstrating evaluative skills, the students were accepting how the researcher presented the findings. This also raises the question about the feasibility of expecting a research critique from students at this stage in their education. The students were more realistic about where they were in terms of understanding research. The quote from Peter below is pretty typical of where the majority of the students saw themselves in relation to their level of research knowledge.

I would not describe myself as informed of research; I would say I am conscious of research and its value to nursing.

It would be wrong to underestimate the impact such views have for nursing. While the students may not feel or demonstrate confidence in their research knowledge, they are aware of the value of research and have plans to address their learning needs in this area when they feel confident in their primary role as a nurse. Clearly the view that research is an important part of nursing is getting through to the students and that can only be viewed as progress.

Keeping the focus on assignments, students also reported how preparation for research classes was often constrained by the competing demands of other coursework, principally assignments that had to be completed. In Chapter 7, the lecturers support the view that the amount of assessment work in the Project 2000 Programme was too high, resulting in ever-present anxiety for the students as they struggled to complete all the coursework on time. The students noted that such pressures were not always evident in the first half of the semester, but became more pressing near the end. When asked why they did not

spread out the assignment workload many reported that they did feel able to complete the coursework until after they had been provided with the theoretical input on that specific area. The effects the competing demands had on time and effort dedicated to the research component of the programme is described by Eileen below.

To be honest there were times that we had so much assessment work to do I did not attend the research classes. I know I should have been there but assessments take so long and there are so many to do that you often have to choose between attending classes and completing the assessment.

The other coursework that the students had to complete was formally assessed, and participants like Eileen described honestly that assessment work tended to take precedence.

Students' perceptions of the practice teaching-learning environment

All professionals rely on the practice area for 'hands-on' experience. Practical experience of certain activities is integral to both their mastery of content and a deeper understanding of their significance. The social settings, in which nursing takes place, and the quality of the social group, have both been shown to be significant in shaping a nursing identity. Professional education programmes recognise the need for higher order learning and require students to demonstrate its acquisition. However, difficulties in making connections between theory, which is the focus of the higher education institution, and the practice in the clinical areas, has long been a problem for professional nurse education (Hislop *et al.*, 1996), and for the students, leading to confusion and frustration. Below, Jane explains her frustration at not being able to apply the knowledge she had gained in university to her practice experience.

I found that certain things that we had been taught in college, certain theories, had not been put into practice, because the environment was not right or, you know, you go along

with the flow, the way the staff is working there, and I have just felt that it is going to be a case of me making my own mind up to, you know, how I feel about it.

How the practice environment affects students seems crucial. Apart from evidence to suggest that self-concept and academic achievement are positively correlated, and thus influence motivation, specific self-perceptions may have significant influence on shaping nursing identity. Students in ward environments are in a very vulnerable position and require support. The development of understanding of nursing, attitudes, ways of working, rules and procedures are all related to the students' existing knowledge base and, while exposure to concepts such as research take place in the classroom, such events are built on and developed within the social setting.

Opportunities to see and discuss research in practice

Some students' comments identify the importance that gains in procedural knowledge and practice have in promoting understanding. Avril describes how research started to have meaning for her when she actually experienced it in practice.

I think when you go to an area where there is research activity it just comes alive and you begin to understand it and why it is so important.

Students had mixed experiences in terms of research activity in the practice areas. Some students were immediately able to identify practice areas where they had seen research activity and the impact this had on their acceptance of it as being important to their practice. For others, the experience was limited and, in some cases, actively discouraged by their mentors. The following quotes from Avril and Jane demonstrate such differences in experience for students from the same University, but from different practice groups.

I found it really interesting because the studies were to do with people in the unit and there was a real commitment to research. I mean time was not important to them; they just brought in an extra member of staff to cover for the researcher. I never saw that

anywhere else. It really helped me to make sense of research and why you should be involved.

I think to be quite honest nursing staff on the wards that I have seen; they are just not interested in research. Well maybe that's not fair. I think they are really just struggling to hold things together. I think that many nurses are just interested in surviving the shift.

The above provides clear evidence of how vital it is that students experience positive research environments at some point in their clinical experience. In Chapter 1, the Literature Review explored the many initiatives within the NHS to implement evidence-based practice. Yet, there remain many areas in nurse students' experiences where such activity is not evident or is actively discouraged. Research in any field has always involved an aura of knowledge and authority, and nursing is no exception. For those outwith the research culture, the activity is often perceived as for an elite, either admired for its intellectualism or dismissed for its irrelevance to every day nursing practice (Mulhall, 1997). Most students in this study reported some experience of negative attitudes towards research in the practice area.

Research by Lave and Wenger (1991) supports the view that being proficient is as much to do with joining a culture of practitioners as it is of becoming technically skilled. Despite preparation prior to embarking on clinical placement, students report high levels of anxiety that may result in great variation as to what is learned during a practice experience. Environments that lower student anxiety also enhance learning and promote self-confidence and self-reliance (Marley, 1980). Snadden and Yaphe (1996) found that students' generally valued places where they were made welcome, supported, and allowed some freedom in terms of practice whilst under the supervision of a qualified practitioner.

A number of studies have identified the importance of practice placements, and models of high quality nursing practice, in facilitating the development of professional skills (Melia, 1987; Smith, 1987; Davies *et al.*, 1993). The majority of participants in these studies clearly identified nurse practitioners in the practice setting as key persons in their development as nurses. This confirms the high value students place on having an opportunity to work with nurses who provide high quality nursing practice, have a sound personal philosophy underpinning that practice, and offer support within the clinical setting (Lelean, 1973; Orton, 1981; Fretwell, 1982; Ogier, 1982; Brown and Atkins, 1988). The majority of the students were able to identify such people. Marie explains about her experience about working with a motivated charge nurse and his team.

I think it is because the staff have a lot of motivation and want the best for their patients, and there is a lot of research carried out by the charge nurse on the ward. He was efficient and always looking for new ideas and ways of making the ward function well. I felt he was encouraging me to learn, he wanted me to ask questions, and not to be afraid of trying out new ideas.

For this particular student, the experience of being involved in a practice area, where research was valued and actively encouraged, appeared to have a strong influence on how she viewed research. She continued

I think research instils confidence. I want to be able to say to my patients, when they ask, that we are providing the best care we can, and that this is based on the research evidence. I think that people want you to know what you are talking about, and that leads to a greater level of trust. You have knowledge to pass on and you know that knowledge is reliable.

Perhaps, too, the educational institutions have a greater role to play in how the student's experience of research is promoted. The Practice Assessment Booklets only mentioned that the student should record any experience of research. This particular aspect was not formally assessed in the same way other practice skills were. If mentors in the practice

areas are to help students, they will need to be aware of what level of research knowledge is expected from the students at the end of their programme. Perhaps, if Practice Assessments Booklets were more clear in what the students should be experiencing in relation to research, mentors would be able to facilitate that learning in a more active manner. In the final discussion chapter a conceptual model is presented which suggests that matching the expectations of both the mentors and the teachers in relation to the level of research knowledge required to promote student understanding of research may well provide a clearer learning journey for the student.

From the interviews with students, we have established the mainly negative reactions created by a feeling that research had no place in the early stage of their education. There was also concern about the way in which it had been taught. However, later on during the branch, attitudes towards research have become more favourable, particularly where the students had positive experiences from practice. We now move on to the views of the lecturers, and their description of the experience of introducing research into the curriculum and teaching it.

Chapter 7

Lecturers' Attitudes to and Experience of Teaching Research

Introduction

This chapter presents the categories that emerged from the interviews with the lecturers who participated in the study. It begins by providing some background information on the teaching group in terms of their teaching experience and academic qualifications, moving on to look at how the change in institutional culture was perceived by the group. Strong feelings were expressed by the lecturers about a 'lack of control' in terms of the move to the higher education context, but more specifically in relation to the development of the Project 2000 curriculum. Additionally, this chapter examines a set of interconnected features that relate generally to lecturing, and coping and dealing with large classes in the CFP. Attention is then focussed on the research component of the curriculum.

The merger and transfer of colleges of nursing, midwifery, and health visiting into universities in Scotland, England, Wales, and Northern Ireland, were completed by 1997. One of the principal reasons for the transfer was to take advantage of the research culture within universities, which many believed would help to focus on evidence-based practice. However, this move to place professional education in the university sector has not been without its challenges, particularly for the teachers. The interview extracts that are presented in this chapter have been interpreted within this context of change, and in terms of my own experience of being a participant within that context.

Seven lecturers were interviewed for the study. All were experienced lecturers with a minimum of ten years of teaching in nurse education. However, the academic qualifications of the group varied considerably. June was thinking about completing a degree, but had not yet registered with the University. Elaine, Fiona and Debbie had completed Masters Degrees in the areas of education and nursing. Anne and Eve had completed their Doctorates, while Paul was in the second year of his.

As with the student group, the early part of the lecturer interviews focused on why they had chosen to come into education. For many of the participants, motivation was driven by the chance to influence student education in such a way as to impact on patient care. Additionally, many had found that an increasing part of their job involved teaching either in the ward setting or as guest lecturers in the nursing colleges. The following quote from Elaine was typical of most responses.

Well really it was becoming more and more a part of my job. I worked in behaviour therapy, and was regularly asked to do teaching in the College and as part of the in-service provision in the hospital. I felt that if I could influence the students that would impact on the care the clients received, so I decided to go into teaching on a full time basis

Anne was the only participant who was an active researcher before going into education and she had a long history of teaching research on post-graduate programmes. It might be assumed that staff with higher levels of academic experience would have led the research component of the programmes. However, as we will see later in this chapter, this was not always the case, and understandably resulted in feelings of frustration, for staff such as June who did not feel *'fully qualified'* for this role. The theme of frustration was evident throughout much of the teacher interviews. The strongest remarks were related to the

numerous changes that had taken place in their working environment over a relatively short period of time.

Institutional structures and policies, and changes in them

There can be little doubt that one of the major responsibilities facing organisations today is managing change. Although change has always been an ever-present part of organisational life, many commentators believe that the pace of change, and the complexity of the issues involved, is greater now than ever before (Freeman, 1988; Handy, 1989; Kanter, 1989). Much has been written on the need to involve those affected by change in planning and executing it (Burnes, 1988; Peters, 1989; Buchanan and Boddy, 1992). However, this blanket sanction often overlooks both the contexts in which particular change takes place, and the varying extents of involvement that are possible.

In terms of the environment for change, Burnes (1992) places significant emphasis on the role of organisational culture. In terms of the actual mechanics of change, he places a similar emphasis on employee involvement. Burns sees these as complementary in relation to successful change. In organisations where a culture of trust exists, where change is the norm, and the expectation is of positive outcomes, then a need to consult and involve employees is less necessary because they are already receptive to change. In a situation where the reverse is the case, as could be argued in the current situation, it becomes necessary to overcome suspicion and resistance and gain confidence and commitment of staff by giving them a positive role to play in the process. This can take many forms, such as making them a part of the decision-making process and /or giving them responsibility for planning or implementing aspects of change.

To appreciate this argument more fully, it is important to have a fuller picture of what both culture and involvement mean, and how they may interact. Culture defines how those in organisations should behave in a given set of circumstances and crucial to the present argument, it contains, as Turner (1971) pointed out, elements of "ought" which prescribe certain forms of behaviour or allow behaviour to be acceptable or not. Culture is not homogeneous and in any organisation there will be subcultures. However, the influence of these will depend on the strength and appropriateness of the dominant culture. The role of culture in a change situation is to confirm or deny the legitimacy of the new arrangements (Deal and Kennedy, 1982; Frost *et al.*, 1985). This also relates to changes of personnel or differences between specialisms that can clash with existing culture in organisations, leading to conflict, the challenging of existing norms and certainties, and the undermining of the authority of managers.

However, culture is not stagnant and Burnes (1991) argues that new circumstances, such as the entry into and exit from any organisation of groups or individuals, all contribute in a intricate and changeable manner to the evolution of culture. Such changes are inevitable, but ultimately may lead to conflict between the old and the new, and between the groups and individuals who have to adjust to them. If change is too fast, as has been demonstrated to be the case in nurse education, or causes too great a disjuncture, rather than sustaining the organisation, it will lead to a disintegration of the common goals and ways of working which have previously existed (Allen and Kraft, 1982). Consequently, it is necessary to recognise that organisational changes that challenge or undermine the cultural status quo can, if managed badly, have severe repercussions. It has been argued

that one of the key methods of avoiding this is to involve those affected in assessing the need for, and implementing change by drawing on their knowledge and gaining their support and commitment (Burnes, 1991; Buchanan and Boddy, 1992).

Nurse lecturers' knowledge of the situation and conditions in which they work is potentially very valuable. Where a problem or opportunity arises which requires change, such individuals may have very much to contribute in terms of whether change is really required and, if so, what form it should take. The need to draw on staff knowledge is fairly straightforward and can, in many instances, be achieved by consultation and communication. However, if this knowledge is to be forthcoming, it does require staff to have a positive attitude towards any proposed change (Cummings and Huse, 1989). This leads on to the second main reason for involving staff in change projects: to gain their commitment. The aim of this is to overcome potential resistance and develop positive attitudes towards change. Clearly, the issue of commitment raises a number of significant questions, especially how an organisation develops a positive attitude towards change among its staff. The following quote from Paul demonstrates how uninvolved the lecturers felt in relation to a number of the changes that were taking place.

I feel very strongly about it and I suppose I was cynical about what was happening. We were in the process of complete change, because it was three different separate institutions amalgamated to form one new place, all in one go. The colleagues I worked with were fine, we had some disagreements, quite strong sometimes, but they were all very good colleagues, and really enlightened I suppose. But I was more disenchanted with what seemed to me to be elite, sort of small numbers of people who were in influential positions, driven by University Departments, and in some respects by academic press, which had also brought about the change. I felt they were a bit removed from the reality of our students, and the sort of course we had been operating. There seemed to be considerable disparity between what appeared to be the aspirations that were involved in the original discussion papers for Project 2000 and, for many people, what was the reality of the student group.

Initially, small colleges and local schools of nursing amalgamated to form larger colleges of nursing and midwifery or colleges of health studies. Such amalgamations often resulted in split sites and geographical disruptions. Staff teams who had worked together for many years were moved to different sites and often found themselves working in new teams where they were unfamiliar with their work colleagues. Some time after the initial amalgamations, nurse education became part of the higher education system. Lecturers now also had to adapt from working in monotechnic institutions, where only the discipline of nursing was taught, to working in higher education settings with a multitude of specialisms.

In evaluating this situation, the concept of cognitive dissonance becomes useful. Generally, individuals try to be consistent in both their behaviour and attitudes. When they sense an inconsistency either between two or more attitudes or between their attitudes and behaviour, people experience dissonance; that is they feel frustrated and uncomfortable, sometimes extremely so, with the situation they find themselves in. Individuals therefore seek a stable state where there is minimum dissonance. The latter point is important, as it is unlikely that dissonance can ever be totally avoided, but where the elements creating the dissonance are relatively unimportant, the pressure to correct them will be low. However, where the issues involved are perceived by the individual to be significant, the presence of such dissonance will motivate the person concerned to try and reduce the dissonance and achieve consonance by changing either their attitudes or behaviour to bring them into line (Robbins, 1986). This may involve a process of cognitive restructuring which is unlikely to be free from difficulties for the individual concerned. However, as Festinger (1957), the originator of the concept, points out, in

addition to trying to reduce the dissonance, people will actively avoid situations and information which would be likely to increase the dissonance.

Since the emergence of the theory of cognitive dissonance in the 1950's, it has been developed and refined, not without controversy (Bem, 1967; Kelly, 1967; Jones, 1990,). One development in particular is worth noting, which relates to the issue of free will. It has been argued that, where individuals are required to change their behaviour in such a fashion that it clashes with their attitudes and gives rise to dissonance, an attitude change will only occur if the people concerned believe, rightly or wrongly, that they had a choice to adopt the new behaviour or not. If, on the other hand, they feel that they are being compelled against their will to change their behaviour, this can lead to high levels of dissonance and perhaps even defiance. It would be wrong to give the impression here that staff felt the move to higher education was wrong. Indeed, despite all the change and the dissonance this provoked, there was a consensus among the lecturers that the move to higher education was the right one. The following quote from June demonstrates the support for the move to higher education

We are moving in the right direction and ensuring a strong academic underpinning in the programme. It is where nursing needs to be.

Most of the distress evident in the transcripts, and in the previous quote, was to do with the way in which the change was being implemented, and the lack of opportunity to say how that change should evolve.

Project 2000 and the influence of the validating bodies

In parallel with the above changes, the new Project 2000 curriculum was also in the process of being developed. Chapter 1 highlighted the rate at which this took place, and

identified some of the research studies that were conducted in relation to the effect this change had on the teaching group. Here, we focus on the participants' views of that experience. In the main, the findings add support to those studies. Lack of time and involvement in the development were the main themes that emerged from this section of the transcripts. In two of the three sites, staff found themselves integrated into new departments and lecturers found themselves working with staff from other disciplines. Additionally, when working on the development of the new curriculum, rather than working as one group, lecturers were assigned to specific small groups responsible for the development for one of the seven themes of the programme. The pace at which the development took place also meant there was little opportunity for these groups to meet and discuss the overall curriculum development. The quote from Elaine below emphasises how isolated these groups felt.

I suppose I did not really feel a part of the curriculum development. We were broken into specific groups and you only concentrated on your own area. It was made more difficult because you often had to work within groups where you did not know anyone.

When programmes are designed at short notice, planners are unlikely to reflect on what it is that they are producing. In addition, time for reflection may also be limited when dealing with the consequences of rapid programme development and implementation. The majority of the lecturers commented on their lack of involvement in the development of the entire new curriculum. Many felt a lack of control, or were unable to see the whole picture, or indeed to have an input into how the content might be delivered. This must have implications for curricula where the research component was embedded.

Some of the lecturers retained their identity as nurse teachers and felt the need to retain specialist knowledge in that area rather than attempt to be expert in all aspects of the

curriculum. They suggested that subject specialists should be involved in the delivery of classes that related to psychology, sociology and research. This was also seen as a means of ensuring that nurse education was 'properly integrated' into higher education. The following quote from Fiona highlights this.

I see that, for this place to be properly integrated our students should be exposed to teachers from other disciplines. I should be teaching the students nursing, so should my colleagues. They should also be exposed to people who are experts in their own subject areas. They should be getting lectures and tutorials from sociologists, psychologists, researchers, social policy experts, not social and behavioural sciences taught by nurses, or research by nurses. I have got no problem with nurses doing tutorials based upon some sort of university lecture, but that is what our students should be doing, and they are not; we just carry on alone. We are not integrated and, when that changes, I think there will be a different agenda, and, a stronger research agenda, and I think the students will get better, will get a better grounding in research.

Any lack of expertise or confidence can be addressed by drawing on internal support networks. However, such activity requires that internal structures exist which permit the nurse lecturer to be involved in discussion about the development of their curriculum. The early stage of integration resulted in a lack of nurse representation on many of the subject specialist groups, and a number of the lecturers lacked the confidence or opportunity to be a part of them. Any change implemented at one level will have consequences at others. While it might seem rational at this level to have subject specialists teaching research, this has implications for the application of theory to practice. Much evidence (Hunt, 1987; Parahoo, 1997; Rogers, 2000) has shown that it is in the application of research that the students have problems. If all the research material were to be delivered by specialists, there is an inevitable danger that students would not be afforded the opportunity to discuss the place of research in their own practice. Later in this chapter an alternative views of other disciplines teaching research will be explored.

Lecturers experienced further frustration in relation to curricular constraints. The UKCC (1986) identified seven themes that had to be included in all programmes. Additionally, the programme structure was also dictated, with the Common Foundation section spanning the first 18 months and a branch or specialist section that was completed in the second eighteen months. Many of the participants felt that from the beginning the focus of development was led by constraints. Many of the transcripts illustrated the feeling of lost opportunity to really make a difference, or to be creative because of the need to ensure they met the UKCC directives. The following quote from Sarah captures this frustration quite well.

I think you often end up with a course, which is not what you really want it to be. We developed a curriculum by looking at constraints, so immediately you are limiting what your curriculum is going to be about. In my view you should write the curriculum you really want, the one that you feel will produce what you are aiming to produce. Then you obviously have to look at the constraints in your resources, and all sorts of other things, and you know, decide what is important within the resources, rather than start from a position where, well, we cannot do this, so we won't even try.

Heterogeneity in the student group

There was an expectation that the qualifications of students entering the diploma programme would increase in line with the higher education outcome. However, in reality the reverse occurred, in an attempt to meet the UKCC's (1987) target for widening the entry gate into nursing. The raised academic level of the new programme is therefore not without its problems, with the mixed abilities of some student intakes ranging from DC (Dennis Child) test candidates to graduates. A number of studies (Jowett *et al.*, 1992; Elkan *et al.*, 1993; Houltram, 1996) have highlighted the problems of such mixed ability in different cohorts of students within the Project 2000 student group.

Houltram (1996) used a retrospective analysis of academic results of three intakes of Project 2000 students to investigate the relationship between entry qualifications, entry age and academic performance. He found that younger candidates (17-21 years) recruited via the DC test route performed the least well and had the lowest overall mean score coupled with a high discontinuation rate. Most courses are unlikely to consist of homogenous groups of students and it is likely that the determination of practice competencies will vary considerably in relation to the experience of the individual. However, the lecturers were very conscious that differences in the educational abilities of their students were now more evident. They were also concerned as to how they might be able to support students in this new climate. A theme, which emerged in relation to the research component, was the problem posed when students held less sophisticated general conceptions of the nature of academic knowledge and purpose than the lecturer. Fiona comments on the change in student attitude.

I think their attitude to learning is different. Some of them, but not all of them. I think some of them who are mature and very well motivated, and this is something that they really want to do. They will try desperately hard to make the links. Some of them come in straight from secondary school and, they don't really know if this is what they want to do, so their learning techniques are not really that well developed.

More concern was evident in relation to younger students and those who had entered through the DC test and how they would deal with research in the CFP. Below, Anne expresses her concern for these 'vulnerable students'.

Some of them are very young really, and have just finished school. These students lack the study skills required to do research. They have no practice experience to hang the theory on, so, it makes no sense to them. The other groups that struggle are the ones who do not have the previous examination experience and gain access to the programme through an entry test. I think that sometimes it is just too much for them.

Some lecturers noted the increase in the number of mature students on the programme whom they felt brought with them a wealth of experience. In the main, this group was reported to have a more positive attitude towards research. The rationale offered by the lecturers was that they had more experience of auxiliary nursing prior to starting the programme and were, therefore, able to apply research to practice. Sarah comments on this change.

I think they do need to have some degree of maturity, to get to grips with research and the sort of research that is important for nursing. They have to have the clinical experience as well, because it does not make sense to them if they have not been in situations where the focus of a particular research project is something they can relate to, and then it is relevant, it means something you know.

Nurse lecturers' experience and conceptions of the teaching-learning environment.

Teaching in large group settings

Constraints were also evident in the physical environment as the increased number of students resulted in a great majority of the master classes in the Common Foundation Programme being delivered in large lecture theatres. Large group lectures do not facilitate student-centered learning, the development of effective communication or team building skills (Eraut *et al.*, 1995; Gregory, 1996). Indeed, as identified in Chapter 3, large class sizes may adversely affect the development of student-centered learning and teaching strategies in nurse education. Several studies (Eraut *et al.*, 1995; Gibbs, 1995) provide convincing evidence that nursing students, in particular, have a lower performance level after being taught in large classes. In his study, Gibbs (1995) demonstrated that nursing students only developed superficial understanding of pure sciences when delivered in large classes. Given that research can be perceived as a science subject, the similar teaching environment may well be a major influence on what

level of understanding the students achieve. Indeed, in the previous chapter the students clearly identified this teaching facility as one of the most difficult in terms of gaining understanding, inability to concentrate, and lack of opportunity to seek clarification.

There was a clear recognition on the part of the lecturers that a considerable number of foundation students might be anxious about their new university environment and somewhat fearful of large lectures. In describing their role at this point in the programme, some lecturers mentioned the importance of helping the students to apply some of the theory to practice, or of providing topics which student could readily discuss from their existing level of knowledge. Such behaviour was aimed at reducing the inhibiting effects of students' perceptions of the differences in expertise, both amongst themselves and with the academic staff. However, it was very difficult to engage all the students in discussion and those students who participated too much were often perceived as unpopular. Lecturers saw themselves as having an active role in providing intellectual challenge and in helping students to construct new understandings of a subject. Such activities run the risk of students exposing a possibly embarrassing lack of comprehension. Tension was often evident in the transcripts between the aim of challenging or restructuring students' understanding and the aim of ensuring that students did not lose face. Below Fiona explains how she tried to improve the experience for the students.

I tried to break them down into smaller groups, but it is difficult to do that, because you can't really, because of the size of the classroom. In the previous course you could circulate around and see how they were doing. But because of the sheer volume of these groups you cannot do that. So really what you are doing, what I think I am doing, is I am giving them a break away from theory to application, getting them to think about something to do, and then trying to facilitate that. But then taking feedback is difficult in there as well. You are inclined to get the same people who respond all the time. And the problem with that, you know, they are ok and they seem to understand, or want to understand. It is the ones who are not talking to you that you worry about. Sometimes

they may feel excluded or they do not have the confidence to speak to you. And they resent the ones who are talking all the time. You can see them muttering to each other. And even controlling that size of group can be, if you want to treat them as adults, it is difficult if you have then got to discipline them for not paying attention.

A theme that ran across all of the accounts was an awareness of the possible anxiety being in a large lecture theatre created in the student group, and the need to promote a climate where students could feel safe to explore and question the topic being delivered. There was a clear recognition on the part of all lecturers that taking part in discussion, and in particular asking for clarification, was anxiety provoking for a large number of the student group, and that this anxiety had to be mitigated by the provision of a climate of safety. Students needed to feel that taking an active part in discussion would not expose them to any threat of losing face. Additionally, lecturers were aware of those students who were not participating and had concerns that their learning needs were not being addressed.

Giving students a general grounding in the discipline in the first year, whilst recognising that there could be doubt as to whether first year students and lecturers shared a common purpose and view of the material being delivered, was also a concern for some of the lecturers. Aware of the lack of opportunity of having some practice experiences to hang the theory on, tactics such as those mentioned above by Fiona offered one way of trying to facilitate understanding within the programme structure. There was a general view that the quest to identify an ideal type of lecture or way of behaving in large lectures may not be a very profitable exercise and that success in teaching would seem to rely in a large part on the ability of the lecturer to respond in a flexible, sensitive manner to the particular needs of a specific group of students.

In any teaching or learning setting, it is important how a group deals with those who are being intolerant or unfair in terms of disruptive behaviour. To pursue their aims of creating a safe environment, lecturers did find themselves, on some occasions, needing to act with some firmness to deal with individual students who are threatening the learning purpose of the remainder of the student group. Limits may then be placed on individual students, and direct, potentially threatening, actions taken against disruptive students. Ideally, such an act of enforcing control can be done without inflicting hurt on the erring individual and without departing too far from the value of ensuring that such students do not lose too much face in such situations. Below, Eve describes how she tried to deal with such instances.

I found it difficult to deal with students who were constantly chatting in the lecture theatre, because I was aware that if I commented on their behaviour it was going to cause them some stress in front of their peers, and there was a danger that they would feel the need to respond to save face. I often found that the best way to address this problem was to refer a question to them or to ask for their opinion about what I had been discussing. Although this caused some embarrassment it often had the effect of letting them know I was watching them.

The staff used a wide range of different teaching activities and varied the style and structure of their lectures. However, often the lecturer only had less than an hour to deliver a specific class and hard choices had to be made in terms of where to focus the effort. Many of the lecturers found this a difficult and frustrating task and openly questioned the value of the experience to the student group. This often had the effect of leading the lecturers to reflect on the values and goals that informed their current practice. Below Elaine describes her experience of such a situation.

I am not a didactic teacher. I do not stand in front of the class and go, 'Here you are, let me fill your empty heads with knowledge". I hope I don't do that. There are

circumstances where I would say, 'Well you have to cover this subject in half an hour', and because it is said that that has to be done you end up having to do that, and I always feel like I am really wasting my time. It is frustrating and not particularly useful, and if you have got 120 students, it is very difficult to be student-centered, and identify what they know, and to get them discussing it, exploring issues, thoughts and ideas. Not with 120 you can't.

Nurse lecturers' knowledge of research and attitudes towards teaching it

Teaching research in large group settings

In general, lecturers were in agreement identifying a number of features that were seen as promoting learning in large classes. Such features included interest and knowledge in the subject, interaction with the student group, and evidence of student's progression in understanding. It will be recalled that in Chapter 1 one of the core objectives of the new programme was that nurses would be empowered to select and evaluate research-based literature in order to influence nursing practice (NBS, 1990). For convenience, this information is repeated here. In the first year, programmes were required to include factors influencing the development of nursing practice, research methodology and application. At this stage, there seemed no explicit requirement that students would begin to apply specific research findings to practice, although this was required for the second half of the programme. Most degree-level programmes have one, if not two, specific research modules those students complete at certain points in the programme. Below, Anne describes how the research component was delivered over a number of semesters in the CFP. The majority of the classes were in a lecture theatre.

In Unit 1, they get 'what is research' type of class and an overview of what they are going to cover over the next five units. Then the history of research is covered, and I think they do a bit on the relevance of research to clinical practice. But we have real problems teaching research with the size of the group. It is done mostly as lectures and that does not go down well. In Unit two we look at methodology. I don't think there is any in Unit 3, only to try and link research more with adult and learning disability. Unit 4 is

mental health and the elderly, and in Unit 4 we also do statistics. So I think we must do qualitative in Unit 3 and, then statistics in Unit 4, and then Unit 5 is a sort of joining together, looking at a research article. We used to do an awful lot more group work than we do now; the students don't evaluate it very well.

Bearing in mind that a large number of the students would have had no practice experience throughout these units, it is possible to see how the research input was perceived by the students as not relevant to their stage of development. However, despite the constraints highlighted in the above general report on teaching in large groups, there was much evidence of effort on the part of the lecturers to make the best of the situation. The following quote from Elaine presents her ideas of how to present a good research lecture and how she used the constraints of the environment to her advantage.

I probably crack more jokes that I should. I dance around the class; I make lots of analogies, and I always refer back to what we have done before. I think about the people that they are going to be looking after, and how research relates to that care. I think it is my clinical experience that helps. You know, there is always something to see, or that I could relate to. You can actually say right OK this is not just theory; this is how it can be used in practice. And you can think of situations yourself where you wish you had dealt with things differently, and would that have been an appropriate way to handle it. I might give them examples of situations where it does not work and get them to explore the reason why it did not work. The aim is to get them involved in the subject.

This quotation highlights the pleasure that lecturers reported when they could see students moving beyond the basic level and developing new constructions related to different topics. There was a consensus among the participants that they should act to ensure engaged participation by the students. There was also agreement on the manner in which they interacted with students, that they should avoid being too directive or acting in an overbearing manner towards the students. Feelings of dissatisfaction with their performance largely centered on the concerns that they had failed to ensure engaged participation by the students, or had taken too directive an approach, or at least too

prominent a part. Most of the lecturers' discussion about lack of participation did not explicitly present the quality or the quantity of the interaction as joint responsibility of staff and students. Many were aware that the way in which the material was being delivered mitigated against participation, and they saw it as their responsibility to try and make the material and delivery as interesting as possible.

When asked how they would like to have delivered the material, Eve offered the following suggestion

I think I would teach it in much smaller groups. I think I would try and make it more relevant to what they know. I would try and link it to research they have been involved in because most people now have been some sort of consumer of research. I would also ask them to make a comparison to real life. You get questionnaires on planes and everything to evaluate your flight. I would try and link it to something they had actually been involved in and then build it up. Then try to link it with what they are doing in their life sciences, and the nursing components of the course, where they are actually maybe looking at research applied to that. I would get them to think about how what they are doing now relates to these other areas. At the moment with the size of the groups, and the fact that a number of them have limited, if any experience of practice I think it is too hard for them to see the relevance of it.

One other problem identified when trying to apply research findings to practice in the Common Foundation Programme was to do with the mixture of the group. The groups were from four different branches of nursing and in some cases there were also midwifery students. Finding an example that applied to the entire group was often perceived as difficult. Those lecturers who had completed degree studies were clear in the view that a specific research module should be included in the programme, rather than small inputs covering a number of semesters in the first year of the programme. Such an approach would bring the nursing programme in line with other undergraduate

programmes in the University, which generally include at least one, if not two, specific research modules. Elaine explains

I would like to see a specific research module for the students rather than a little bit of input in each semester. I think this would be easier for them to make sense of research. I don't think we should have it too early in the programme, they would not know what to do with it.

In many cases, other lecturers from the newly developed faculty or school delivered the research component. Earlier in this chapter, Fiona commented on the need to use specialist lecturers for research. While the rest of the teachers could see the relevance of using internal expertise, they had concerns as to how this would affect the students' ability to apply research to practice. In two of the sites, the research component started by being taught by nurse lecturers but, as the emphasis on research developed, the teaching team changed. Paul was particularly concerned about this practice.

We don't get to teach research anymore and that means that the students are not going to be able to apply the research to their practice, particularly if a psychologist who has no understanding of the issues of research in nursing is teaching it.

Chapter 2 explored a number of studies (Clifford, 1993; 1995; 1997) that had been conducted on the abilities of nurse teachers to be credible in relation to their knowledge of research. Clifford (1995) found that very few teachers, apart from those registered on, or who had completed a higher degree had undertaken research studies. More recently, Kirk *et al.,* (1996; 1997) showed that only about 6% of nurse teachers possessed research degrees. Moreover, training in research methods and skills were identified by these nurse teachers as being one of the most important of their educational needs. This view is supported in the examination of the curricula in this study, where all the sites identified research training as being essential for staff development. However, with the exception of

June, the staff group had all completed academic studies to at least degree level. Indeed, several had completed masters and two had completed doctoral studies. Yet, there was still a lack of confidence evident in all lecturers about teaching research. This raises the question about ability or confidence to teach research. Some of the constraints that lecturers encountered related more to departmental policies and the actions of colleagues. There was also some confusion as to why certain individuals were chosen to lead the research component of the programme. June for example, pointed out how she was informed that she would be taking responsibility for the research component of the programme despite her lack of knowledge and experience in the area. It was confusing for me as an observer, as to why a staff member with a Ph.D. and experience of research was not selected to take this activity forward, or at least to act as a means of support to Jane.

Content and method of teaching and assessing the research component

Move to the Branch section of the Programme

The interview extracts presented over the last few pages have given a sense of emotional satisfaction that comes from successful teaching and bringing about engaged interactions with the students. The strong dissatisfaction that arose from not being able to act in what was perceived to be an appropriate way has also been detailed. Once in the Branch section of the Programme, where the student group was now reduced to a maximum of ten, a more student-centered ethos could emerge. There were more opportunities to check out in greater detail technical concepts and procedures. Both Rolfe (1994) and Jowett *et al.,* (1994) reported positive changes in the attitudes of students as they progressed from

the Common Foundation Programme to Branch, and in the last Chapter students expressed a similar opinion.

A number of the lecturers commented on the changes evident in students in the Branch section of the Programme. They recognised that it was often more difficult to engage with the CFP students than it was for them to enter into the mindset of the branch students. To a certain extent, once the students entered the Branch section of the programme, there was also a feeling amongst the lecturers that they were now really their responsibility. Lecturers then felt more confident in applying research findings to their teaching. When asked how she incorporated research into her teaching in branch, Sarah explained that she usually tried to relate research findings to the specific subject area being addressed.

I will bring in research as we are looking at different things. If we are looking at groups, we will look at some of the research done on groups; if we are looking at the nurse-patient relationship, obviously there is a lot more research going out on that, so we can pull in research as we are discussing aspects of communication that are important for nursing, in terms of students getting taught, what is research and how is it done.

However, while lecturers like Sarah above were able to explain what they did, they were still unsure how this related to the overall experience of the student. There was an expectation that other lecturers used research findings in similar ways to underpin their lectures, but there was no real opportunity afforded to the lecturers to check this out, and no evidence of any particular strategy in place to facilitate a team approach to integrating the subject. However, Eve described how she had changed her approach to teaching research to the branch students in an attempt to help them apply research to their practice. She explained that she did a pre-test with the student group when they arrived at the Branch section of the Programme. This activity allowed her to assess where the students

were in terms of research knowledge, and from that she could begin to plan how to help them to apply research to practice. Eve explains the difficulties in getting the students to engage with research.

I now do a pre-test when they come into Branch so that I can find out what their base level is and superficially they have a good level of knowledge. They are able to determine the differences between qualitative and quantitative research, and they know about the different ways of collecting data, but they are loathe to go a bit deeper, and I think that is to do with the structure of research in our programme because they seem to cover everything about research in foundation. I think it is a bit like moving from clinical tasks to holistic care, they have a superficial grasp of research and later when they are qualified they can explore this in more depth. It is so depressing when you are sitting in front of a group of apathetic faces, particularly if the Programme Leader decided to give you the first morning slot, or the last slot on a Friday afternoon, and that often speaks volumes about the attitudes of the programme leader to research. I do say to them that it is expected that their diploma assignment is research based, and that they need to provide an explanation of the research in the assignment, they cannot just quote the article. But from marking the assignments it is evident that not a lot of the students do that, yet, they still pass, and that is down to the teaching staff. Maybe we are expecting too much from them.

Eve's comments are very in touch with the feelings expressed by the students in the previous chapter. She raises a number of important points relating to the attitude of some of the lecturers to research and the lack of any real strategy to promote research in terms of the time available, and the way it is assessed in the Diploma assignment.

Assessment

When the three curricular documents were examined, it was very difficult to get a feel for how research was actually assessed in the Programme. Only one of the sites used a specific research assignment. The other two documents indicated that research was assessed as part of the overall assessment strategy. The specific research assessment was described as a research critique and was a part of the Branch Programme. In the previous chapter, the students who completed this assignment rated the experience as a very negative one.

The possibility of assessing students on the research component of the programme was discussed in some detail with the teacher group. Objections of principle were raised to the idea and there was considerable concern expressed about the practical difficulties of carrying out such assessments. A chief objection raised in many of the interviews was related to the high degree of formal assessment already evident in the programme and how any change might create anxieties among the students. However, there was a general consensus that, when students are assessed, they tend to focus more on the subject and consequently, gain a better understanding of the subject. Sarah explains

I think their assignments force them to actually get to grips with some research, because they need to understand some research to do that, and their discussion needs to demonstrate use of the evidence. I think we try to encourage them to say 'So and so found this'. We also want them to comment on what so and so did in the research, and was it a good piece of research or were they left with questions. I mean the researcher may claim that she has found this, but she only used eight people, so really is that any use to us.

In the previous chapter, students admitted that often they did not attend research classes because they had to complete assignments or prepare for examinations for other subjects. Getting through the assessments was essential if the students wanted to remain on the Programme. Below, Eve is more definite that a research assessment is necessary if the students are to perceive it as important.

We need to assess them on research otherwise they think it is not important. Students learn very quickly that they have to concentrate on areas that are being assessed. I think it is a mistake not to assess them directly on research.

Experience and attitudes of mentors and other ward colleagues related to research

The essential nature of practice experience in consolidating student learning has already been discussed in the last chapter. Many of the lecturers were skeptical about the amount of research experience a student was likely to encounter in the practice areas.

If you had asked me 'What do I think the students see in the real world of practice with regard to research?' I would say, 'Very little in many areas in which I have a supervision role". There is not a research climate out there at the moment. I think in practice, where the students are they see very little research in action and they (the students) come back to this never ending problem between what is on the agenda in the University, so to speak, as opposed to what is the practical agenda for those people who are working at the sharp edge. Paul

Reasons offered for the lack of a research climate varied from the possibility that staff rejected research because they were afraid of it, or because they resented having to change their practice. Lecturers, like the students were aware of the lack of a research culture and despite the fact that many had a supervisory role in practice areas they still felt isolated from practice and from being able to support any change there. June explains

The education people, in many respects, are still very much isolated from that work arena, the practice arena. Therefore the sort of questions they might be asking are sometimes quite different from perhaps the questions the person on the ward, or the person working as a CPN, or a therapist somewhere may well be asking. So until they can make research a sort of agenda for everyone, not just an elite few, it is going to be difficult.

Here, June highlights that the resistance to research is not just evident in the clinical arena. She sees research as an elite activity in nursing, an elite group of individuals who ask specific questions, but maybe not the right questions. June here is also highlighting the differences in theoretical and practical research activity.

The early part of this chapter demonstrated the strong emotional feelings lecturers attached to the numerous institutional changes they had experienced in the development of Project 2000. It is also evident that they are very aware of the learning environment, and the problems students face in terms of their experience in large classes in general, but more specifically, in relation to research. Descriptions of the strategies used by lecturers to improve large group environments, and their views on how they would like to deliver

the research component of the programme have been explored. The lecturers reported a distinct change in the student group once they entered the Branch section of the Programme. As with the student group, opinions about the research culture in the practice area were negative, and concern was expressed as to how students could realistically develop their research knowledge in the current climate.

We now move on to the Discussion Chapter, in which the principal categories that emerged from the analysis of the data are discussed. Finally, a heuristic model of the interaction of the various influences identified within this study is presented and discussed.

Chapter 8

Discussion, Conclusions and Implications

Introduction

The previous two chapters identified the main categories that emerged from the analysis of the interviews with students and lecturers. In this chapter we shall draw out the main conclusions within these categories and show how these influence the quality of learning about research achieved by the students. Considering these influences systematically, and relating them to previous research into student learning, allowed me to develop a conceptual model that clarifies the ways in which they interact, affecting the learning of nurse students both in general terms and in relation to learning about research in nursing and its value and application.

In deciding how best to organise the various categories, I considered one of the early attempts to describe influences on student learning. Figure 1 (Chapter 3) showed learning outcomes in relation to three main sets of characteristics – those of the students and those related first to the teaching, and then to departmental and institutional policies on teaching and assessment. In this study, there were additional influences within practice settings (as experienced by the students) and also broader influences created by major changes in the location of nurse education (from specialist colleges to universities) and the introduction of Project 2000 along with other effects from validation procedures. The structure for discussing the main findings thus takes the following form and will be presented in the order as shown below.

1. Institutional and external influences

a) Project 2000 and influences of the validating bodies

b) Institutional structures, and policies and changes within them

c) Assignments and assessment in all curriculum components

2. The academic teaching-learning environment and the experiences of the lecturers

a) Nurse lecturers' experiences and conceptions of the teaching-learning environment

b) Nurse lecturers' knowledge of research and attitudes towards teaching it

c) Content and methods of teaching and assessing the research component

3. The experience and perceptions of the students

a) Students' existing knowledge, and expectations about nursing.

4. Experiences within the practice setting

a) Students' perceptions of the practice teaching-learning environment.

b) Opportunities to see and discuss research in practice.

c) Experiences and attitudes of mentors and other ward colleagues related to research.

5. Experiences within the academic setting at CFP and Branch stages

a) Students' perceptions of the academic teaching-learning environment.

b) Approaches to studying the research component.

These findings are brought to bear collectively on the work carried out by Entwistle (1998) Entwistle and Smith (2002) and Entwistle *et al.,* (2003) who have produced conceptual models shown in Figures 1, 2 and 3 in Chapter 3. This has led to a development of a new conceptual model that is discussed here in section 6. The Chapter

will finish with section 7, which offers a reflection on this research activity, and in section 8 implications for nurse education and the nursing profession and recommendations for further research are presented.

1. Institutional and external influences

1a) Project 2000 and other influences of validating bodies

What any individual lecturer can achieve is constrained by departmental and institutional policies and also, to a varying extent, by the content requirements imposed by professional bodies or disciplinary conventions. Chapter 1 described the struggle within nurse education as it moved from an apprenticeship to an academic model of education. The UKCC, NBS and the RCN can all be seen to have made substantial contributions to this development, culminating in *Project 2000 - a New Preparation for Practice* (UKCC, 1986).

One of the core objectives of the Project 2000 Programme was to empower nurses to select and evaluate research-based literature in order to influence nursing practice (NBS, 1990). Implicit within this statement was the expectation that the new programme would equip nurses to appraise current practice using research findings and act, at least to some degree, as agents of change. There were research expectations for students both at the early and final stages of the programme.

In the first year, programmes were required to include factors influencing the development of nursing practice, both research methodology and its application. As we have seen, the first year of the programmes did provide the theory related to research methodology, and small group activity was employed to assist with application.

However, we also saw that the students found it impossible to engage with the research literature at that time. The practice placement booklets had a particular learning outcome related to application of research in practice, but as we have seen during the Common Foundation Programme students had had little or no experiences of seeing research activity in the practice areas.

The analysis reported in Chapter 6 suggests clearly that the expectations expressed by the validating bodies are not being achieved for a number of reasons. Some of these relate to the learning-teaching environment (discussed later); others relate to the students' perceptions about the value of research to their practice during their basic education.

1b) Institutional structures, and policies and changes in them

The development of a research base for nursing has become part of the formal strategy for developing research-based evidence for health care in general. Additionally, the introduction of the Research Assessment Exercise (RAE) in the higher education institutions has placed nurse education in a position of having to develop its research capacity rapidly. Numerous studies (Baillie, 1994; Clifford, 1992; 1993; Crotty, 1993) into the role of the nurse lecturers have reported a lack of preparation for this role. The findings here show that the teaching groups experienced some lack of preparation and a high degree of stress and frustration during the transition to higher education settings.

They were also the factors identified in other studies, such as role confusion, conflicting demands, uncertainty and lack of direction (Payne *et al.,* 1991; Robinson, 1991a; Elkan and Robinson, 1993; White *et al.,* 1994; Clifford, 1995; Luker *et al.,* 1995). The findings of the study conducted by Luker *et al.*, (1995) suggested that only some two percent of

nurse lecturers had a research degree at that time, although this has been changing since. In the current sample of seven lecturers, three had completed, or were in the process of completing, doctoral studies and, of the remaining four, three had completed Masters Degrees. The interviews suggested that, rather than being academically unprepared to teach research, lecturers had lacked guidance in terms of the level of research knowledge to include, the opportunities within the university system to support their activity and confidence in taking on this new role. Disagreement also existed between lecturers as to who should teach the research component of the programme. Some lecturers suggested this was a nursing responsibility, particularly in relation to application, whilst others were of the view that it was a subject specialism and as such should be delivered by lecturers proficient in that area.

1c) Assignments and assessments of all curriculum components

Chief among the constraints on the time spent on studying research were the competing demands that students faced from other coursework. The curricular documents demonstrated that only one of the institutions formally assessed the research component of the programme directly. The other two curricula claimed that research was assessed within the wider assessment framework. Additionally, practice documentation referred to only one research outcome. Students acknowledged that when under the pressure of time the demands of formally assessed work were given precedence. Indeed, during these times of high pressure to complete assessed work, attendance at research classes and preparation work for the classes were neglected.

Chapter 6 provided examples of how research assignments were carried out. For example, a research critique was completed by answering a list of questions, while the reading of research articles only addressed the points with which students were comfortable. Analysis sections, particularly statistics, were omitted. Students believed that they had successfully completed a critique, when in reality the academic level fell well below what was expected.

Teachers, too, realised the choices the students had to make and accepted that some of the students would prioritise assessments, as they determined progression more important than the research classes. The students also recognised that, when they failed to prepare appropriately as a result of competing demands from other work, the quality and quantity of their participation fell markedly. This is an obvious point; but not a trivial matter for good practice. Giving more thought to the structuring of the research component, and dovetailing practice experiences in terms of the assessment booklets, could bring about a considerable improvement in the quality of the research component within nurse education.

2. *The academic teaching-learning environment and the experiences of the lecturer.*

2a) Nurse lecturers' experience and conceptions of the teaching-learning environment

Within the literature there remains an ongoing debate about the differences that exist in the ways in which university lecturers think about academic matters. There is accumulating evidence that the way academic staff conceptualise learning and teaching influences both their approaches to teaching and the way in which students reach higher levels of learning outcome (Entwistle and Walker, 2000). The most recent

phenomenographic research suggests a hierarchy of five distinct conceptions of teaching with a main contrast between a teacher-focused conception (with an orientation to content) and a conception that is student-focused (with a conceptual development orientation).

How course materials are selected, organised, presented and assessed may well both reflect and help to form the particular teaching conceptions held. However, there are many possible ways of translating thinking about teaching and learning into practice, as university lecturers take into account the nature of the intake and the stage of development the students have reached. The thinking would also be influenced by the nature of the subject being taught. The teaching approaches adopted in this study were seen to be influenced by the departmental ethos, the resources and time available and the university policies relating to funding and assessment procedures.

The concepts, models and analytic procedures that lecturers are familiar with inevitably influence their thinking about teaching, affecting the examples they use, the evidence they find convincing, and the nature of the relationship they see between teaching and learning. The way in which teaching was carried out in relation to research in the CFP was clearly influenced by the environmental constraints, institutional priorities, the teachers' lack of confidence in teaching research, and the stage of development of research in nurse education. Strong outside pressures were also evident from the validating professional bodies who dictated the outcomes of the research content for both Common Foundation Programme and Branch, yet failed to include research as one of the key seven themes that formed the structure of the programme.

The situation for the lecturers paralleled that of the students as staff were also in the process of adapting to major changes in their own environment. They reported that they felt they had little control over the changes that had gone on, and continued to go on around them. Smaller nurse institutions were amalgamated to form one new department, staff groups were restructured and a new curriculum was being implemented, covering subject areas not previously addressed in nurse education. Additionally, major changes in Government policy in terms of a customer focus and a market culture in both the NHS and Higher Education institutions meant that nurse education could no longer be directed by a solely educational focus.

Lecturers in their roles as gatekeepers for a discipline and guides to the less expert have a responsibility to ensure that students are brought towards the construing of particular topics or problem situations in an appropriate manner. While performing these responsibilities, lecturers are helping students to gain new framing perspectives on topics such as research, and to develop their professional skills. They are also assisting students to gain knowledge and ways of acting which will allow them, in turn, to participate more fully in professional and academic life, and to take some part in the debates which enliven and sustain their discipline.

From the accounts of the lecturers in the study, it can be seen that teaching in large groups is not simply a technical matter of rationally applying appropriate teaching and group facilitation tactics and techniques, it also involves the need to make moral decisions in how best to act when different duties conflict. These decisions are often made under conditions of uncertainty, as lecturers can never really predict how a student

may respond to a particular comment. Lecturers were keen to discuss what did appear to work well and how things should work in lectures. Specific techniques such as moving around the lecture theatre to ensure involvement of the majority of the students and the use of humour in presentation were frequently reported by the lecturers. They also attempted to counterbalance the lack of clinical experience in the first six months of the programme by providing examples of application of theory to practice. However, there were no reports of such activity in the research components of the programme, perhaps because the majority of the lecturers had little experience of seeing research in practice, either during their own experience as practitioners or in their role as lecturers with links to clinical areas.

2b) Nurse lecturers' knowledge of research and attitudes towards teaching it

Several studies (Clifford, 1993; 1995; 1997; NBNI, 1990; Jowett *et al.,* 1994) have already been mentioned in Chapters 1 and 2 which examined the preparation, attitudes and orientation of nurse lecturers towards research, and emphasised that one of the major issues facing nurses in the university context was the need for an improved research capacity. Within this study, there were mixed views about the place of research within the programme and who should teach the research component.

In the main, lecturers were positive about the importance of research to the future of nursing. They recognised the changes that were going on in the clinical environment and the implications for nurses in the future in terms of evidence-based practice. As previously identified a number of the lecturers had recently completed masters degrees and had a reasonable knowledge of research theory. However, few had been actively

involved in research activity (apart from small studies completed as part of an academic programme) and links with practice research were only beginning to emerge.

Problems for the lecturers in terms of research related to the frustrations about the way in which it had to be delivered in the Common Foundation Programme in particular. They all agreed that a specific research module in the branch section of the programme would be a better option and as we have seen the students agreed with this. However, in Chapter 2 there are reports from a number of studies (Stam *et al.,* 1990; Forte, 1995; Hauff and Fogerty, 1996), which suggest that such an approach may not be a solution. These studies indicated that, despite research material being delivered in this way, knowledge of statistical and methodological issues remained inadequate. Riegleman (1986) suggests that, rather than a specific module; there is a need for training throughout a programme. His study suggest that, unless training in research is extensive and intensive, it may only serve to alert students to the many dimensions which must simultaneously be considered when evaluating research literature, and so lower their confidence.

2c) Content and methods of teaching the research component.

The content of the research component was influenced by the core objective of the new programme that dictated outcomes for the research component. Chapter 7 provides a good example from one of the sites of just what was included in each semester in terms of research. Lecturers were required to include factors influencing the development of nursing practice, research methodology and application in the Common Foundation Programme, and this was achieved by providing a high degree of theoretical input on research approaches, data collection techniques and analysis. The material was delivered

over a number of semesters, with each semester building on the last in terms of content. Lecturers reported often having to provide an overview of the previous semesters' input, as students were unable to remember the content. Other lecturers checked students current knowledge through getting them to complete a short test prior to commencing teaching in a new semester, or when moving from the Common Foundation to the Branch section of the Programme.

However, during the Common Foundation Programme, there was no explicit requirement that students would begin to apply scientific research findings to practice, although this was required for the second half of the programme. Teaching methods were constrained by the institutional structures that promoted the use of large group teaching in the Common Foundation Programme, and as we saw in Chapter 6 and 7, students and lecturers were both dissatisfied with the arrangements. However, in Branch there was a change in both the class size and the delivery of the research component that resulted in a more positive evaluation by both lecturers and students.

3. The experience and perceptions of the students

3a) Students' existing knowledge and expectations about nursing

In essence, the quality of learning achieved inevitably depends, in part, on the knowledge and understanding with which the student enters a programme, along with the associated abilities, motives, and expectations about nursing. Most courses have heterogeneous groups of students, and participants in this study proved no different. Among the many variations were students who had previous clinical experience but little academic

experience, those with academic experience but no clinical experience, and direct entrants from school.

As previously explained, the first six months of the programme were spent in the academic institutions with copious amounts of theory being delivered in large group settings with students having no experience of the clinical environment at that time. Despite the differences among the students, a theme that emerged in the early part of the interviews related to the strong expectations students had of being involved in activities that directly related to being a nurse and learning the skills related to caring for patients. From the start of their programme, there was an expectation and a strong desire to spend time in the practice environment. There was also a strong feeling that it was in practice where the students would see what was expected of them, and so learn how to become a nurse.

The diversity in previous knowledge and experience, as we will see, presented different challenges to individual students. Those who had been auxiliary nurses had some experience of the practice environment and were able to apply some of the theory to their past experience. However, this group did not expect the academic components of the programme to be so demanding and consequently struggled to keep up with academic demands. Direct entrants and students who had previously completed a degree struggled with the application of theory to practice. The first two groups had some advantage, either in the form of academic or practical knowledge, over the younger students, who had to adapt from the experience at school to a different kind of working relationship with lecturers, and also to take more responsibility for their own learning. The above

findings are in line with previous research findings on Project 2000 (White *et al.*, 1994; May *et al.,* 1997) As the students reflected on their early experiences in the Common Foundation Programme, there was a general feeling that they wanted to learn what it was to be a nurse first, before having to make sense of some less obviously relevant aspects, including research.

An interesting finding in this study related to the views of degree entrants to the programme. Despite previous experience of learning about research, this group did not feel they had any real understanding of it. In interviews, there was no evidence of them making use of previous experience or knowledge in this area. They were equally frustrated about the amount of time spent on it, compared with those areas more directly related to nursing.

The students also talked about their sense of identity as a nurse. Students recognised that this identity had developed throughout the three years of the programme, and during the third year interviews this process was felt to be still continuing. These views are in line with those reported by Clarke *et al.,* (1996) who explored the preconceptions, philosophy and practice of nursing within Project 2000. Their findings indicate that students had entered the course with lay perceptions of nursing that changed as the course progressed. But even by the end of foundation studies, students were only just beginning to see themselves as nurses. Other studies (Bradby and Soothill, 1993; Mangan, 1992; Clarke *et al.,* 1996) suggest a marked change as students move into the branch section of the programme. Given that the students interviewed in their third year of study recognised their continuing development, there is a strong suggestion in the findings of this study

that nursing identity remains a developing process throughout Project 2000 and, as we will see when we explore attitudes to research within the programme, subjects not directly perceived by the students as related to that identity are felt to be better left until after registration.

Strong parallels exist between the experience of the students in the first six months of the Common Foundation Programme and Perry's (1970) ideas about intellectual development (discussed in Chapter 3). Perry (1970) found that students' experience of higher education was in conflict with their conceptions of knowledge. In this study, students reported the same experience. They expected to be told how to be a nurse (dualistic thinking). Instead they were presented with inconclusive evidence, alternative theories relating to psychology and sociology, and competing value systems demanding of relativist reasoning.

Dualism implies a belief in the existence of right and wrong answers to every question and, in the early stages of the Common Foundation Programme; students often treat staff as the ultimate authority from which they expect the right answers. Students found the variety of subjects and views unsettling, and tried to handle those feelings in their own ways. As in Perry's (1970) work intellectual development in nursing education can also be seen to involve a gradual integration of previously separate ways of thinking, leading to an increased awareness of the complexities of academic knowledge. In later sections this aspect is explored further in terms of the students' perceptions of the learning-teaching environment, both in the practice and the academic settings.

4. *Experiences within the practice setting*

4a) Students' perceptions of the practice teaching-learning environment

All professionals rely on the practice area for 'hands-on' experience. Practical experience of certain activities is integral to both their mastery of content and a deeper understanding of its significance. In nursing, the social setting in which nursing takes place, and the quality of the interactions within the social group, have both been shown to be significant in shaping nursing identity. However, the contrast between academic and practice experience has been highlighted by research into professional education (Lacey, 1985; Melia, 1987), which also indicates the stress reported by students who have to cope with quite different sets of experiences in university and the practice setting. Student nurses not only have the long-term aim of learning to practice as professionals, they also have to learn to practice as students, or trainee professionals. In each of these contexts, they must cope with the varied demands of professional education as well as the role of novice professional.

Professional education programmes recognise the need for higher-order learning and require students to demonstrate its acquisition. However, as we saw in Chapter 2, difficulties in making connections between the theory, which is the focus of the higher education institution, and practice, which is the focus in the clinical areas, has long been a problem for professional nurse education (Hislop *et al.*, 1996). This leads to confusion and frustration for the students.

In this study, there was considerable variation in the student's views of the extent to which they found research and other material in the programme to be connected. A

division of opinion was also evident over the value of maintaining a link between theory and practice experience. For most students this was a very important matter. They advocated a close connection between what they learned in university and the experience they received in the practice area, on the grounds that such a link allowed them to develop a tight, sharply defined understanding of programme content. This was particularly evident in terms of helping students to understand research. It was when they had seen research in practice and had an opportunity to discuss what they had seen that it began to make sense to them. However, students reported very little experience of actually seeing research in practice.

Examination of the transcripts revealed no such experience within the practice components of the Common Foundation Programme. Two explanations are offered for this. The first relates to the students' reported desire to learn to be a nurse. Students perceived their practice experience as a time when they learned the skills of patient care. Skills such as taking blood pressure were, not surprisingly, given priority over information related to research. The second point concerns the clinical practice booklets that the students completed whilst on placement. Examination of the booklets revealed only one reference to research, although the students were required to report on any research activity they had witnessed whilst on placement. The practice placement booklets were assessed and students had to satisfy 80% of the learning outcomes to progress on the programme. The proportion of the course related to research meant that student could, in theory, not complete this section and still progress on the programme. From the students' comments (and the examination of the practice placement booklets),

however, it seemed that their knowledge at this stage fell well below the guidelines on the Common Foundation Programme expected in the Project 2000 documentation.

4b) Opportunities to see and discuss research in practice

There is much evidence in the nursing press of studies on the utilisation of research findings in nursing, with the majority being quantitative in nature and focusing on a specific area of practice. There have been studies of ward-based nurses (Rogers, 2000); community nurses' use of research-based evidence in the care of leg ulcers (Luker and Kendrick, 1995); practice nurses' use of research findings in relation to cervical smears (Williams and McIntosh, 1996); cardiovascular diseases and strokes (McDonnell *et al.*, 1997); mouth care and pre-operative fasting (Hunt, 1987); and catheter care and pain control (Camiah, 1997). Other studies have been more general in nature (Lacey, 1994, 1996; Parahoo, 1999). The majority of the above studies show that some nursing practice is already evidence-based. But students in this study experienced only limited opportunities to see research in practice. For those who did experience this type of environment, however, the change in how they saw the value of research to nursing was notable. They reported how they became aware of the fact that research was directly concerned with the patients, and how important it was to provide the right treatments and to be able to justify to the client group that the care they were receiving was evidence-based.

Despite this dearth of clinical experience of research, a strong theme running through the student transcripts was the knowledge and belief that research was important to nursing,

and that most of them had plans to explore it when they had finished their basic programme.

4c) Experiences and attitudes related to research of mentors and other ward colleagues.

Within Project 2000 a fundamental change was expected in the role of the mentor in the practice area, to facilitate the application of theory to practice. Specific training programmes were implemented for mentors in light of the major changes that had taken place in the education programme. While mentors in the practice areas were not included as participants in this study, both the students and the lecturers were asked for opinions on how the mentors had assisted in the application of research theory to practice.

White *et al.*, (1994) have argued that the nature of the student-mentor relationship is fundamental to the quality of the learning experience. In this study, students reported mixed views about their experiences of the student-mentor relationship, although they were able to differentiate between good and bad practice and to choose appropriate role models. However, they also reported that the time they had with their mentor was often limited by competing demands made on the mentor, and the lack of time specifically for teaching and supervising.

Students suggested that mentors' knowledge about research utilisation seemed to be rather limited, and they reported learning environments where research was even actively discouraged. Some students put such experiences down to a lack of interest but in the main, this was seen as a consequence of the competing demands on clinical staff. Students appreciated contexts that allowed them to gain procedural knowledge and practice. They felt that their understanding was promoted when staff had taken time to

provide guidance and support, provided learning materials on the ward, and through seeing ward environments that were clearly effective in terms of patient care. But opportunities to see research activity, or research findings implemented, were limited.

5. Experiences within the academic setting at CFP and Branch stages

5a) Students' perceptions of the academic teaching-learning environment

This section relates to students' perceptions of the whole teaching-learning environment provided in the nursing education programmes; later we shall look specifically at the research component. In looking at the general perceptions, students commented on the major adjustments that they had to make to their prior experiences in order to fit into the large-group settings required by university traditions of teaching, especially in the Common Foundation Programme. This involved learning to cope with listening to theory presented as lectures in large classes, participation in discussion within those groups and learning to take more responsibility for their own learning. Previous researchers have also commented on the discomfort felt by students in the Common Foundation Programme (Bradby and Soothill, 1993; Jowett *et al.*, 1994; May *et al.*, 1997). What the present study adds is much more detail on the specific aspects of the teaching-learning environment which caused this discomfort. It also identifies specific activities that students felt had promoted their understanding.

The feelings reported by the students can be seen in relation to the experimental study conducted by Fransson (1977). Anxiety-provoking situations in themselves were not found to induce a surface approach to learning; rather it was produced when the student felt the situation to be threatening. In this study, students in the Common Foundation

Programme did report feeling anxious in large-group settings and this did affect the way they approached their learning tasks. This anxiety was compounded by a lack of practical experience and an unfamiliar setting. Even with some practice experience, students were also anxious, as they had generally been away from study for some time.

Concerns about a possible loss of face were very prominent in the students' comments about theory lectures and about making an effective contribution to the discussions. Chapter 6 highlighted the coping strategies employed by students to deal with these fears. Waiting to hear what the more confident students had to say was a regularly employed tactic. This allowed the less confident students to confirm for themselves their level of understanding, and at the same time, by agreeing with these comments, to participate. It did not, however, provide them with an opportunity to check out any other thoughts or ideas they had. We have already seen that lecturers were very conscious of the emotional effects of this type of environment and tried various teaching strategies to reduce student anxiety and distress.

However, negative attitudes to lectures need to be balanced with the potential benefits that this type of delivery afforded. Previous research presented in Chapter 3 (Brown and Atkins, 1988) found that well-presented lectures could introduce a topic and provide a conceptual outline of the subject. Additionally, they can be used to increase student motivation and to convey a distinctive way of thinking about a discipline. The majority of large lecture sessions consisted of a period of theory followed by small group activity. Students reported that this activity enabled them to work together or to seek out fellow students from their own branch selection, and this did help reduce their anxiety.

A review of the literature conducted by Gardiner (1994) indicated that many lecturers are ineffective because they include too much detail, provide little illustration and offer few opportunities for active involvement by the students. Other studies by Hodgson (1997) and Ramsden (1992; 1997) have identified seven main categories - level, pace, structure, clarity, explanation, enthusiasm, and empathy - as constituting a 'good lecture' from the students' perspective. Further interviews with students suggest that it is the final three - explanation, enthusiasm, and empathy - that are most likely to support a deep approach to learning (Entwistle, 1987b). As we saw in Chapter 3, clear explanations affect the extent to which students are encouraged to make sense of a topic in their own way. Additionally, such explanations can be used to model distinctive forms of argument and the use of evidence adopted in a discipline. Brown and Atkins (1988) emphasise the value of evoking intellectual curiosity through the use of problems or paradoxes, and demonstrate how good explanations depend on being appropriate (both to the topic and the students' existing knowledge) and on the extensive use of examples, analogies, metaphors and personal anecdotes. Combining a supportive framework within the lecture with many links to related ideas is likely to encourage deep learning.

The enthusiasm shown by the lecturer communicates itself to students and arouses interest. In Chapter 3 we saw how some lecturers may even create a conversion experience through the vicarious experience of relevance (Hodgson, 1997), which shifts the students from a surface to a deep approach. Additionally, students have commented on the lecturer's perceived concern with them as learners and their appreciation of lecturers' willingness to answer questions and to provide opportunities for discussion (Brown and Atkins, 1988).

The above activities were reported in the Branch section of the programme in this study where students expressed appreciation for the encouragement and understanding provided by some of the lecturers, and commented on the motivating effects of the supportive shaping of understanding by those lecturers. They welcomed the attention that was being given to them and the support given to their efforts to contribute and understand. Some participants commented on the feelings of enjoyment and engagement that arose when lecturers' teaching actions afforded them the opportunity to think more deeply about a topic. The motivating effects of friendly, engaged interaction with teachers and peers with whom students were familiar also figured largely in the accounts of the branch section of the programme. Participants reported changes over time in the quality of the social atmosphere in the latter half of the second year of their study, which were, in part, the result of members getting to know each other better and the fact that they were now actively focussing on their specific specialism.

A strongly expressed theme that ran through the students' accounts in this study was the importance of lecturers making explicit their expectations of how students ought to be engaging with their studies, and the rationale for why certain subjects, not perceived by them as relevant, were included in their first year of study. If one views studying as not simply a matter of individuals efficiently applying themselves to learning tasks, but as a form of learning which is shaped by the norms and practices that characterise academic institutions, such demands for clear instruction and expectations from lecturers seem reasonable. The students emphasised the need for lecturers to ensure that they were not left to second guess what was required of them. Students need to be assisted to

understand and perform academic tasks in a manner that is regarded as appropriate within institutions of higher education.

There was the clear expectation that lecturers would make appropriate use of their authority as subject experts in the teaching situation. Chapter 2 explored a number of studies that highlight how active involvement, or lack of it, affects the way new material is stored and subsequently retrieved (Boreham *et al.,* 1985; Gayford, 1988; Tobin *et al.*, 1988). Several nurse education studies have also shown how large group settings prevent the introduction of student-centered learning (Eraut *et al.*, 1995; Gregory, 1996). In this study, students expressed their appreciation of lecturers who attempted to involve them in settings that enabled them to gain new knowledge and perspectives as a group, and to refine, or to construct, new understandings of a topic. Students also disliked peers who disrupted the lectures or those who did not complete the preparatory work required.

In the interviews, students also reported on their expectations of how lecturers ought to exercise their influence. Lecturers were seen as having legitimate control in certain areas and were expected to pursue certain tasks with vigour, while at the same time being expected to show considerable constraint in others. Students' reports of the order that they believed ought to prevail in classes became more apparent when the descriptions of what they regarded as breaches of this order were described. In line with the views of Gardiner (1994), strong feelings were expressed against lecturers who talked too much, used too many overheads, or dominated proceedings by exercising a very tight control over the lecture environment. Additionally, lecturers who did not display a good

knowledge base of their subject or those who refused to allow questions, related to a lack of understanding, were viewed by the students as unsatisfactory.

It was clear in all the students' comments that the move to the Branch section of the Programme represented a major change in how they perceived their learning experience. A contrast was often drawn between the learning and teaching in Foundation Studies and that of the Branch Programme. Students reported feeling more at ease in this group where they knew the other members, and indicated the existence of a different form of interaction with both their peers and the lecturers. Others stressed how gaining subject knowledge and clinical experience had influenced the quality of this interaction. A final point raised by one student was that, because of the size of the group, it was impossible not to be involved in discussion at this stage. Students also reported an increase in intellectual demands, the expectations that were placed on them to demonstrate more independence and personal initiative in their studies. Yet, at the same time, the move to branch also increased the students' motivation to learn about what they considered to be their area of choice. As a result, there was a distinct increase in readiness and confidence in joining in discussion.

5b) Approaches to studying the research component

So far, we have explored the findings from this study that relate to the wider teaching-learning context. Here, we focus specifically on the students' perceptions of the research component of the programme and their approaches to studying it. Generally, research classes within the Common Foundation Programme consisted of a lecture for about 40 minutes followed by small group activity. As already mentioned, students' experiences of

large classes in the lecture theatre were unsatisfactory. Furthermore, many of the issues identified in the previous section relating generally to the teaching–learning environment also applied to the research section of the programme.

An additional problem with the research component in Common Foundation Programme was the way it was delivered across a number of semesters. Students found difficulty in remembering what had been covered in previous semesters and this tended to compound the negative view they had of it. Research terminology and statistics were perceived as barriers to learning, but students' developed ways of coping with this difficulty. For example, when given a research article to read in small group activity, students read the introduction, underlined the main points, skipped over the statistical aspects, and then read the conclusions. Other ways of dealing with classroom tasks (communication and feedback) have already been discussed in the preceding section.

Students had a grasp of research terminology but not an understanding of its meaning. Chapter 6 illustrated how a student in the third year of her programme was still struggling to differentiate between quantitative and qualitative research approaches, and other students spoke of the language of qualitative research as particularly difficult to understand. This particular theme related to all theory, but was particularly felt in relation to research and other subjects not directly related to practice experience.

Chapter 3 examined the vast amount of research that has been conducted into approaches to studying. At the most fundamental level, researchers have described student approaches as being within two categories, both of which relate to the student's intent to learn. One a deep approach with the intention to understand in relation to previous

knowledge and experience and the other is a surface approach that involves simply complying with course requirements in a fairly routine way.

Students' accounts of the ways of tackling the research component generally indicated a surface approach to learning. They reported their learning more in terms of going through the motions to meet the approval of the teachers, rather than being involved in developing understanding and application to practice. This surface approach was evident in both sections of the programme, but when students had experienced research in practice (in the Branch section of the programme), there was much more evidence of a deep approach emerging.

The frustration students felt at having to learn subjects that were not perceived as directly related to patient care has already been mentioned and, in the Common Foundation Programme, lack of clinical experience in the first six months compounded this problem. Implicit and explicit criticisms of the current teaching of research were a central feature of both student and lecturer respondents and reflect a number of issues. The students perceived the delivery of the research content of the curriculum as poorly organised in terms of teaching strategies, size of classes, time allocation and placing of theory within the programme. Further, they struggled with the language of research and statistical analysis that ultimately affected their ability to complete set tasks such as evaluating research papers.

Lecturers identified the need to accommodate markedly different approaches to academic tasks. Given the variation that previous research has shown to exist in students' general purpose in studying and ways of working, it is not surprising that participants should

differ in what they saw as the distinctive contributions that research, as a subject, could make to their understanding of the course as a whole. Over time, there was a marked shift in the experience of research, with students in their final year recounting how their perceptions of, and attitudes towards, research had changed over their academic career leading to a deeper approach to studying. Parallels between the student accounts of their overall development from Common Foundation Programme to Branch, and the lecturers' views on how interactions and motivation among final year students differ, are also apparent from the findings.

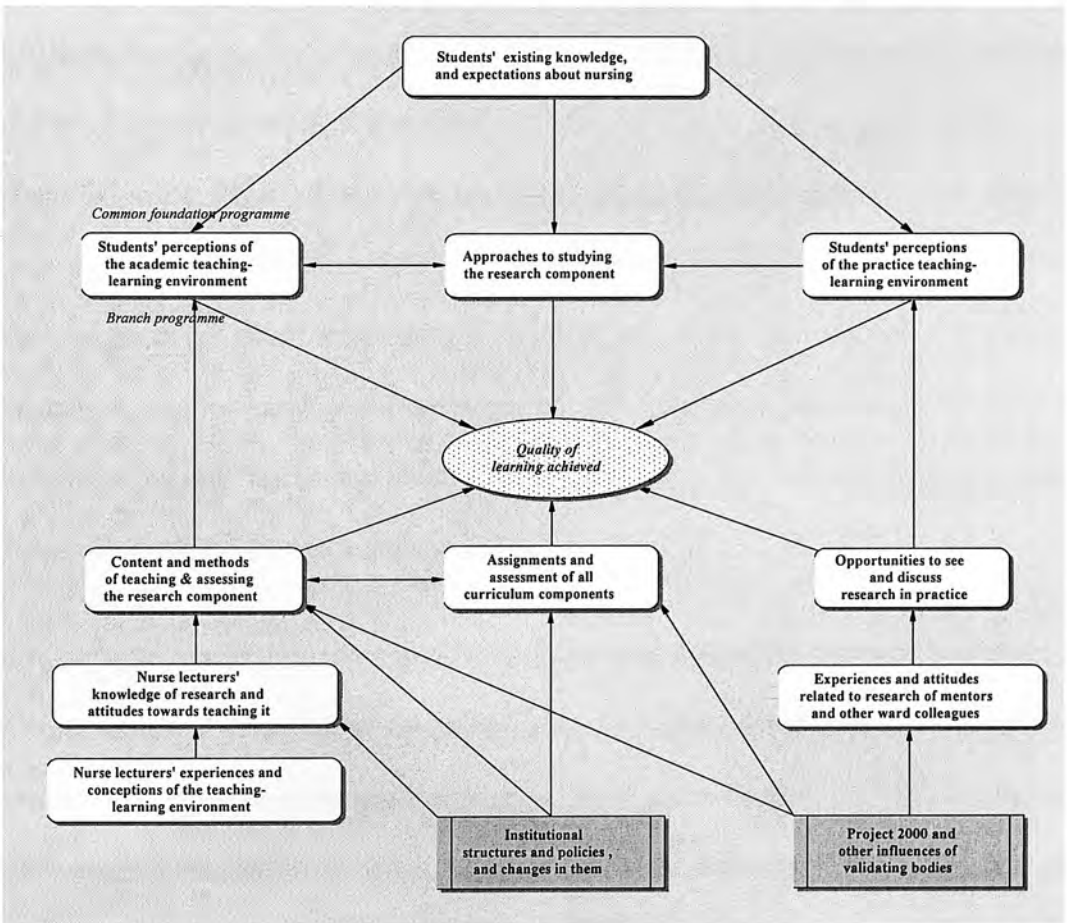
6 *Developing a conceptual model for analysing influences on the learning of nurse students*

The logical structure used to describe the main findings within the various categories identified from the interview analysis provides the starting point for the development of a conceptual model that indicates how the categories interrelate and combine in affecting the learning of nurse students. It is thus possible to use the earlier conceptual frameworks reported in Chapter 3 to suggest a way of presenting these influences and inter-relationships in Figure 4. Although the focus of the study was on the teaching and learning of research, many of the comments made related to the curriculum as a whole, and so this model can be readily adapted to describe nurse education more generally. The main categories established in the analysis of the data and presented in Chapters 6 and 7 and further listed on page 212, were the starting point in the development of a conceptual model specific to learning research in nurse education.

The main structure of the diagram presents the student characteristics at the top with the quality of learning achieved in the center. On the left are the influences from the

academic teaching, while those from the practice environment are on the right. The shaded boxes at the bottom bring in the effects of the institutional structures that were in a state of flux at the time of the study, and the strong influence of Project 2000 in shaping the curriculum experienced by the students.

Figure 4: Concept model describing influences on the quality of learning about research in nurse education



Evidence for the dominant direction of influence comes mainly from the previous research, but is supported by comments from staff and students in this study, but the model as a whole is not intended to imply any strict or direct causality. Rather, the

concept model represents a pattern and a web of influence, supported by both the findings of this study and previous research, which act together in explaining the reported experiences and actions of the students learning about research within the nursing curriculum.

Looking now at each of the influences outlined in Figure 4, we begin with those with external and institutional effects on teaching, (*italicising in the description references to the boxes in the diagram*). *Project 2000* and the associated validation procedures, along with the different institutional structures, policies and practices of universities, have been shown to have a direct influence on the course teams who had to devise new curricula. They have also affected, more indirectly, the nurse lecturers and mentors. Lecturers have been required to teach large groups of students within the Common Foundation Programme, and to teach topics (like research), which were not previously included in the curriculum. As staff were interviewed when these changes had just been introduced, their effects were particularly noticeable at that time.

Mentors were required to adopt a rather different role in guiding students, and again the changes occurred just before the study was conducted. Some mentors' attitudes to research, and those of other ward colleagues, were generally seen by the students to be lukewarm at best, and even hostile in some instances. Although the situation has been changing, there remains wide variation in attitudes towards research and thus in the experience of student nurses in their practice settings. Mentors were expected to provide opportunities for students to see and discuss research in practice, but at the time of the

interviews these were not often in place. Students' experiences were affected not just by the observation of good practice in relation to the use of research, but also by its absence.

Lecturers came into the new situation created by merger and by Project 2000 with established conceptions about how to design effective teaching-learning environments, based on their previous professional and teaching experience. There was often a conflict between their beliefs about how best to teach and the traditions of the university context. The assessment requirements implied by Project 2000, and required by the universities, also needed a major adjustment in lecturers' thinking and practice.

At the time of the interviews, there was therefore great uncertainty about the new role and methods of teaching that lecturers were being expected to adopt. For some lecturers, there was also a lack of confidence about their own experience of research, and knowledge about it, which clearly affected the content and methods of teaching and assessing adopted. That in turn affected students' perceptions of the teaching-learning environment, particularly during the introductory phase of the programme. Once members allowed more familiar methods of teaching through seminar and discussion in the Branch Programme, staff and students both felt more comfortable, and students' perceptions of the teaching-learning environment changed markedly.

Students came into the programme with very different sets of experiences, and different levels of knowledge and confidence. They also had very clear expectations about nursing and what they should be learning – the role and skills in being a nurse. Those expectations were largely contradicted by their initial experience of a substantial amount of theory, with unclear relevance from their perspective. These initial experiences and

attitudes could be seen clearly in the interviews to have influenced their perceptions of both the academic and the practice components of the programme, and their approaches to studying. These effects were particularly marked in the research component that was viewed as being both difficult and irrelevant in the introductory part of the course.

The overall chain of influence from prior experience and knowledge, to perceptions and approaches, and to the quality of learning achieved, is well established in the previous research described in Chapter 3, although allowing for there being complex inter-relationships as well. More recently, that research has also been tracing a similar logical and empirical set of connections from lecturers' conceptions of teaching to their approaches to teaching and their classroom practices. These inevitably affect students' perceptions of the teaching and assessment they experience and also their approaches to studying. Although there is no empirical evidence yet to make similar connections in relation to the practice setting, the logical path shown in Figure 4 was implicit in some of the comments made by the students and can be inferred from the previous research within a variety of settings.

7. Reflections on this study

All the three main aims that underpinned this study have been addressed. Contrasting perceptions of mental health students and teachers of the research component of the Project 2000 Programme have been presented and discussed. The influence of the learning environment on the quality of learning within the research component, as perceived by the participants, and the implications of these influences for the future development of teaching research within nursing programmes will follow this section.

Finally, throughout the data analysis, comparisons of the findings of this study with previous research on teaching-learning environments have been made, leading to a conceptual model to summarise the conclusions reached.

Although this study has extended our understanding of the variety of aspects within the teaching of nursing which affect the quality of the learning achieved by students, particularly in relation to the research component, it is essential to note the limitations of the study. The study was small in size, using only three of the then twelve nurse education institutions in Scotland, and with small numbers of participants in each, who were volunteers. In the interpretations of the analyses the direct influence of the researcher herself as both a teacher of research and a researcher in this area is acknowledged, as well as other circumstances affecting the project. It was carried out on a part-time basis over an extended period, while numerous changes were occurring in nurse education. As a consequence, some of the analyses reported here can no longer give a valid representation of the current reality: inevitably a study of this type is historically bound, but that has been recognised in drawing implications from the findings.

The analysis in this study was carried out by the author, and checked by a colleague, whereas other studies have generally involved teams of researchers working together on the analyses. This inevitably created difficulties in the analysis as I tried to bracket my previous experience and knowledge of what already exists in the literature. Such bracketing can never be fully achieved, but I was well aware of the influences my experience was likely to have.

Phenomenography was selected as an approach for the study because of its extensive use in research on student learning. However, the literature on this relatively new approach to qualitative research creates difficulties for a newcomer. Its methods and underlying theory are not easy to disentangle in reports of the studies carried out. There proved to be few full descriptions of equivalent analyses in phenomenography, and even then it was rarely made clear how fully the approach had been applied. Such a problem is not uncommon in qualitative research and similar problems were evident in the early development of grounded theory. There was also some ambiguity and lack of clarity in how to operationalise phenomenography. Additionally, as phenomenography developed, it focused less on the context of learning and teaching, whereas for this study that was a vital consideration. The decision to maintain the focus on context throughout the study was in keeping with the early research studies on student learning within everyday study settings, such as those conducted at Lancaster.

In terms of analysis, I chose to use whole transcripts of the interviews which led to themes and categories emerging during the analysis that related to the general teaching-learning environment, as well as the research component.

In spite of the acknowledged limitations, the findings not only supported previous research related to Project 2000, but also added to the literature through the detailed analysis of influences on students' approaches to studying. It is argued that this study has broken new ground in research on nurse education by drawing attention to aspects of teaching and learning of research seen from both student and lecturer perspectives, an approach that has been largely missing in previous studies.

The main contributions of the thesis are seen as the following:

- Developing and describing in detail a form of phenomenography that allowed the various influences on the quality of learning research in nursing to be explored in a fully contextualised and holistic way.

- Showing the interaction of these influences within a conceptual model to draw attention to the components that have to be considered in planning and implementing the teaching of research within a nursing curriculum. A conceptual model of this kind can be seen not only to guide practice, but also to provide a theoretical model to underpin the teaching of nursing.

- Drawing attention to the unrealistic expectations within Project 2000 of expecting lecturers, most of whom had little experience of research, to teach it to students who, during the Common Foundation Programme, were much more concerned with developing their nursing skills. At least at the time of this study, the research competencies expected by the Professional body were not being achieved for reasons that the study outlined.

- Showing how failure to provide experience of research within the practice environments has a negative effect on students' perceptions and approaches to learning.

- Pointing out the unanticipated consequences of requiring nurse teachers to adopt university practices of teaching large lecture classes, and the anxiety these approaches created in students.

8. *Implications for education and the nursing profession.*

The study, although on a small scale, has drawn attention to issues identified by both staff and students, although seen from their own differing perspectives. Some of those issues relate to nurse education in a fairly general way but, given the main focus of this study, they relate mainly to the teaching of research within the nurse curriculum. As the interviews were conducted several years ago, it is essential to take into account the way the context has changed since. Nurse education has become more firmly embedded within the new university context, lecturers have had more experience of teaching research, and have become more research active, and the place of research within the practice setting has become more widely recognised. Nonetheless, there is much still to be achieved, and the findings from this study help to draw attention to issues that remain unresolved, and possible ways of dealing with them. It is, however, beyond the scope of this thesis to develop such possibilities in more than an indicative way.

Given the strong desire by incoming students to acquire the basic skills of nursing and also their attempt to develop a nursing identity for themselves, it is possible that the way in which research is introduced in the Common Foundation Programme could be restructured. Chapter 2 highlighted a number of studies that address this area. On the basis of the findings from this study, it is suggested that research continues to be introduced in the first year of the Programme, but in a less threatening and more integrated way. Rather than deal with just research methodology, research classes should be much more action focussed, involving the students in research that relates to their stage of development. For example, if they are learning about blood pressures in another

area of their Programme, then the research activity could also be related to that area. Additionally, where students are from a specific Branch (e.g. mental health) research related to their area of specialty should be included.

A more radical option would be to develop a special introductory research module focusing on practice and research in the practice area. Problem-based learning has increased in popularity in nurse education with one successful approach for improving research knowledge, developed in McMaster University, concentrating on the integration of clinical practices with research and the use of research principles to inform decisions about nursing care and treatment. In this study the students were motivated by practice and being able to be a competent practitioner, consequently a research module that focuses on this aspect should maintain the students' interest.

Students found the large-group lecture classes during Common Foundation Programme anxiety provoking and ineffective in helping them to understand research methods, leaving them unprepared to read the research literature. The logical conclusion would be not to use large classes for research input, however, given the current climate in higher education it is likely that this form of delivery is likely to increase rather than decrease. Rather than use large classes for lectures flexible learning packages could be developed with specific research related activities. This could include research terminology sheets related to a specific clinical issue. For example there is a great deal of research related to hand washing and wound care in clinical practice. Worksheets related to the specific research methods used in the studies could be developed and students divided into work groups from the start. Feedback could be from each group.

In the Branch section of the Programme it is suggested that the research component is assessed formally either in the form of an examination or a specific research assignment and that the results of these assignments should form part of the Diploma assignment. One clear finding in this study was that, when an area in the curriculum was not formally assessed, students tended to leave it until later or to complete assessed materials in the time they should be attending classes. If group activity in the research classes were to be assessed as a part of the overall formal assessment in the Programme, then it could be expected to arouse more motivation to attend the classes and complete the work.

A concern emerging from the analyses was that the assessment procedures being used at the time of the interviews seemed not to cover the competencies being required by the professional bodies. Moreover, in the work that was carried out, students did not seem to have reached the expected outcomes. It seems probable that the outcomes being suggested are unrealistic, given the prior experience and knowledge of the majority of entrants. It would assist both staff and students if these expectations were to be revisited and modified to create a better match with both the students and the academic level of the remainder of the programme. Additionally, students and mentors both need clearer outcomes in terms of research activity in the clinical areas suggested in the practice placement booklets provided. In addition, if students are using research in practice, then this should be recognised in the formal assessment strategy. For example, students could complete a research report as part of their clinical experience that would form part of the overall academic assessment of the Programme.

Finally, the conceptual model presented here relates to the teaching of the research component in nurse education. However, it also provides a series of questions and areas of consideration in designing an overall teaching-learning environment that would avoid anxious surface approaches and engender more confident, and deeper, approaches to studying in the nursing curriculum, thus enhancing the quality of the learning achieved.

9. Suggestions for future research

The implications derived in the previous section, along with the earlier discussion of what this study has achieved, suggest certain directions for future research – specifically, the following:

- In terms of methodology, it is suggested that the 'contextualised phenomenographic' research approach be used to further explore the influences on student learning within nursing programmes.

- Some of the possibilities mentioned for encouraging a confident, deep approach in students should be introduced and their success monitored using the combination of questionnaires and phenomenographic methods that have proved successful in previous research into student learning in other subject areas.

- Carry out a study equivalent to the present one within a variety of practice settings to explore how research is actually perceived by mentors and students within those settings and how those experiences related to the experiences of staff in the university and the professional bodies.

- Discover the extent to which experienced nursing staff, compared with recent diplomates, describe their uses of research in seeking to improve the ways in which care is provided.

It has become clear through this project that there needs to be more evidence-based support for the rhetoric on evidence-based nursing, and its place in teaching and learning. The thesis has provided a basis for developing research in nursing education in this direction by describing a fully developed methodology especially suitable for this research purpose. In addition, it has offered a conceptual framework that provides a stronger theoretical underpinning for nurse education, derived directly from the experiences of students, as well as staff, in nurse education. In so doing, it also contributes to the wider research into student learning which is currently paying more attention than in the past to teaching and learning within the differing subject areas.

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Appendix 1

Introductory letter / Information Sheet

Dear.....

I would really appreciate your participation in a study which aims to explore the perceptions of student nurses and nurse teachers about their experience of learning and teaching research. The study is sponsored by the National Board for Nursing, Midwifery and Health Visiting for Scotland. I am interested in collecting information on your views and experience of research both in the clinical areas and the classroom. Yours views and experience are genuinely considered important in this study and I do not aim to judge the perceptions and views you hold.

The study involves collecting data by interview and would take about 90 minutes of your time. For this purpose I would ask you to participate in an interview at a time and place convenient for you. To aid me in the analysis of information collected I would like to tape record the interview. If you do not wish to be recorded, notes will be taken instead. Interview tapes or notes will be coded and individual participants will not be identified by name. Students will also be asked to attend a focus group. My supervisors and myself will be the only people with access to the information collected during the course of this study. To ensure continued confidentiality all tapes and transcripts will be secured in a locked filing cabinet throughout the study. To ensure anonymity, all tapes will be identified by a code known only to the researcher.

On conclusion of the study a thesis will be written and submitted to the University of Edinburgh. A copy will also be submitted to the National Board for Nursing Midwifery and Health Visiting for Scotland. In the report no participant in the study will be identified by name or the specific location of the areas that the study took place.

If you agree to participate in the study you retain the right to withdraw from the study at any time. If you wish to ask any further questions about the study you may do so either from myself or Dr Maureen Macmillan in the Department of Advanced Nursing and Midwifery Studies at the Canaan Lane Campus of Napier University. Telephone Number 0131 536 5600

Thank you in advance for your help

Gerardine Matthews Smith
Researcher

Appendix 2

Participant Consent Form (Student)

Project Title *Teaching and Learning Research in Nurse Education: Perceptions of Lecturers and Students of the Experience of Research in Project 2000.*

Investigator Gerri Matthews Smith Phone 0131 536 5600

The purpose of this research project to explore the perceptions of student nurses and nurse teachers about their experience of learning and teaching research. Interviews will be conducted on two occasions and will last approximately one hour. During these interviews questions will be asked regarding your feelings about you experience of the course to date in both the practice and university settings. These tapes will not be shared with any other individual except my university supervisor, but the final report, containing anonymous quotations, will be available in the form of a university thesis.

There may be no direct benefit to you as a participant of this study, but there may be changes in the teaching of research on the Diploma programme following the completion of this study.

THIS IS TO CERTIFY THAT I .....(print name)
HEREBY agree to participate as a volunteer in the above named project.

I understand that there will be no health risks to me resulting from my participation in the research. I hereby give my permission to be interviewed and for these interviews to be tape recorded. I understand that, at the completion of the research, the tapes will be erased. I understand that the information may be published, but my name will not be associated with the research. I understand that I am free not to answer specific questions during the interviews if I so choose. I also understand that I am free to withdraw my consent and terminate my participation at any time. Not participating fully will not affect my experience of the course in any way.

I have been given the opportunity to ask whatever questions I desire, and all such questions have been answered to my satisfaction

Participant.....

Researcher.....

Adapted from Field, P., & Morse, J. (1996) *Nursing Research - The Application of Qualitative Approaches.* London: Chapman & Hall

Appendix 3

Participant Consent Form (Staff)

Project Title *Teaching and Learning Research in Nurse Education: Perceptions of Lecturers and Students of the Experience of Research in Project 2000.*

Investigator Gerri Matthews Smith Phone 0131 536 5600

The purpose of this research project to explore the perceptions of student nurses and nurse teachers about their experience of learning and teaching research. An Interview will be conducted on one occasion and will last approximately one hour. During the interview questions will be asked regarding your perceptions of the students' learning experience of research during the course in both practice and university settings. These tapes will not be shared with any other individual except my university supervisor, but the final report, containing anonymous quotations, will be available in the form of a university thesis.

There may be no direct benefit to you as a participant of this study, but there may be changes in the teaching of research on the Diploma programme following the completion of this study.

THIS IS TO CERTIFY THAT I .....(print name)
HEREBY agree to participate as a volunteer in the above named project.

I understand that there will be no health risks to me resulting from my participation in the research hereby give my permission to be interviewed and for these interviews to be tape recorded. I understand that, at the completion of the research, the tapes will be erased. I understand that the information may be published, but my name will not be associated with the research understand that I am free not to answer specific questions during the interviews if I so choose. I also understand that I am free to withdraw my consent and terminate my participation at any time.

I have been given the opportunity to ask whatever questions I desire, and all such questions have been answered to my satisfaction

Participant.....

Researcher.....

Adapted from Field, P., & Morse, J. (1996) *Nursing Research - The Application of Qualitative Approaches.* London: Chapman & Hall.

Appendix 4

Interview Schedule – Staff

Hello. I am Gerri Matthews-Smith and I am a postgraduate student at Edinburgh University. First I would like to thank you for turning up for this interview I really appreciate your participation. I would like to emphasize this is not a question and answer discussion and there are no right or wrong answers. In the interview we will explore a number of areas that are related to your current programme of education

I wonder if we could start by exploring why you came into nurse education, length of time as a teacher?

(PROBES) interest in teaching, making a difference,

There has been a great deal of changes in nurse education. I wonder if we could spend a bit of time looking at them first

(PROBES) involvement in education prior to Project 2000, involvement in the development of the new curriculum, research component of the new curriculum, personal views of place of research in the new curriculum.

What are the major differences between the new programme and the 1982 scheme of training?

(PROBES) content, introduction of new themes, emphasis on health, research component, and their involvement in the development of the research component.

How is research structured in the curriculum?

(PROBES) teaching techniques, number of hours terms research is included. Integrated into the curriculum or seen as a separate component. In depth exploration of research in foundation and branch sections of the programme.

Are you involved in research?

(PROBES) own knowledge of research, confidence to teach research, experience of being involved in research projects.

Is there pressure on teachers to be more research active?

(PROBES) Entry into the higher education system, research activity in practice areas, increase in research in nursing.

Experience of teaching research

Are you happy with the way the research component is delivered in the programme?
(PROBES) How would you like it to be structured? When do you think research should be introduced to the students? How should it be presented? What teaching techniques would you like to use if given the choice?

Research in practice

Do you think the students have the opportunity to see research in action in practice?
(PROBES) who would be doing the research, what environment encourages research activity, what is your own experience of research in the practice areas you support?

If you were to describe the level of knowledge a student should possess about research at the end of the diploma programme where would you place them?
(PROBES) degree level and masters level

Appendix 5

Interview Schedule – Students

Hello. I am Gerri Matthews-Smith and I am a postgraduate student at Edinburgh University. First I would like to thank you for turning up for this interview I really appreciate your participation. I would like to emphasize this is not a question and answer discussion and there are no right or wrong answers. In the interview we will explore a number of areas that are related to your current programme of education.

I wonder if we could start by looking at why you wanted to come into nursing

(PROBES) motives for entry to nursing, why choose mental health, the particular university, and previous experience

What was your first experience of becoming a student? How did you feel? What happened when you first arrived?

(PROBES) Friendly mix, staff and students, learning environment
Course information. organised, particular problems

Tell me a little about the subjects you study on the course

(PROBES)
What have you liked best or least about the course. Which subjects preferred and why. Previous experience of any of the subject matter. Expectations that this would be an area of study in nursing.

I would like to move on now to discuss in more detail how relevant you found certain subjects in you practice. Although I am interested in your views of all areas I am particularly interested in the research component of the programme

General discussion followed by more detailed probe about research.(PROBES) Explore the main subject areas for foundation studies and which subjects were of most value and why. Teaching and learning techniques, How were the subjects delivered. Teaching techniques used for research input. Class size. Explore ways of learning and studying, focus on particular piece of work (assessment) and discuss in detail.

Tell me about how you prepared for this assignment?
(PROBES) timing of assignment, preparation time, literature review, ways of reading the articles, understanding of research material, ways of coping with lack of understanding of terminology

Ways of learning

(PROBES) tell me how you go about reading an article/book Use specific examples of articles the student can remember reading. Explore technique e.g. underlining, use of highlighters etc Feedback on findings about foundation studies and exploration of the same areas in relation to branch programme.
(PROBES) difference in branch presentations

Are you preparing any assignments just now? Tell me how you are going about this?

Is the presentation of research different? Are there specific areas where research is evident

There has been a great deal of talk about the place of research in nursing education and practice can we spend some time exploring your views of this?

(PROBES) own views and thoughts about research. Experience of seeing research in practice. Own views of their knowledge of research to date. When and how should research be introduced to the programme?

Explore student's knowledge level of research.

(PROBES) How much knowledge do you think you have of research? Do you think it is relevant to your future practice?

Research assignments

(Where relevant) (PROBES) How did you feel about having to do this assignment? Did you feel it was relevant? Why? Would you like more/less input on research?

Research in practice

Findings in practice what has your experience of research been like in practice?

Any questions you would like to ask or comments you would like to add?

Appendix 6

Focus Group Interviews Schedule

Hello. It is really nice to meet with you again. Thank you for giving up your time to talk to me today. As I explained in the individual interviews this interview is intended to focus on your practice experience.

General discussion about practice experience

(PROBES)- where, how long, good or bad experience

Research materials in the practice area

(PROBES) books, journal articles

Opportunities to see research in practice

(PROBES) Type of research, who was involved, opportunities for students to be involved, learning opportunities, who helped, who did not, what did you learn, was it useful, if yes why, Did it relate to your experience in University. Usefulness of information from university in relation to research to your practice.

Attitudes of staff to research

(PROBES) Positive attitudes, informed about research, use research in practice, refer to research in conversation